Supporting the Science of Informal Cancer Caregiving: Highlights of NCI-Funded Research

Webinar 4 – Tuesday, April 19, 2022 1 PM ET
Using WebEx and webinar logistics

- All lines will be in listen-only mode
- Submit questions at any time using the Q&A or Chat Panel and select All Panelists
- You may need to activate the appropriate box using the floating navigation panel. Found on the bottom of your screen
- This webinar is being recorded
Welcome to Webinar 4

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Healthcare Delivery Research Program
Division of Cancer Control and Population Sciences
National Cancer Institute

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Program Director, Outcomes Research Branch
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National Cancer Institute

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Senior Public Health Advisor
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Healthcare Delivery Research Program
Division of Cancer Control and Population Sciences
National Cancer Institute
Webinar Outline

• **Presentation 1: Dr. Mosher**— Telephone Support Program for Adults and Their Family Caregivers Coping with Advanced Gastrointestinal Cancer

• **Presentation 2: Dr. Bradley** — Emotional and Financial Health of Caregivers of Patients with Cancer

• **Presentation 3: Dr. Kim** — A Self-Management Intervention for Lung Cancer Surgery Patients and Family Caregivers

• **Dr. Smith**: Questions and Answers
Presenters

Catherine E. Mosher, PhD
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School of Science
Indiana University-Purdue
University at Indianapolis

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Division of Thoracic Surgery
Department of Surgery
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Cancer Research
Professor and Associate Dean for
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Health
Deputy Director, University of Colorado
Comprehensive Cancer Center
Catherine E. Mosher, PhD

Telephone Support Program for Adults and Their Family Caregivers Coping with Advanced Gastrointestinal Cancer
Telephone Support Program for Adults and Their Family Caregivers Coping with Advanced Gastrointestinal Cancer

Catherine E. Mosher, Ph.D.

Department of Psychology, Indiana University-Purdue University Indianapolis
Background: Advanced Cancer

• As fatigue interferes with patient functioning, family caregivers face increased demands that impact their quality of life.

• No conclusive evidence regarding effects of medications and behavioral interventions on fatigue in patients with advanced cancer

• Small to medium effects of behavioral interventions on cancer caregivers’ burden and quality of life

(Badr & Krebs, 2013; Hanly et al., 2015; Janda et al., 2017; Mucke et al., 2015; Northouse et al., 2010; O’Toole et al., 2017; Poort et al., 2017; Vardy et al., 2014; Walling et al., 2015)
Background: Acceptance and Commitment Therapy (ACT)

Aims to increase mindful awareness of present experiences and the pursuit of activities consistent with personal values.

In pilot trials, showed promise in improving functional outcomes and quality of life in patients with cancer.

Has rarely been tested in caregivers of adults with chronic illness.

(Arch et al., 2020; Han et al., 2020; Hayes et al., 2012; Li et al., 2021; Mosher et al., 2018; Rost et al., 2012)
Study Aims

1. Evaluate the feasibility and acceptability of delivering telephone-based ACT to patients with advanced gastrointestinal cancer and their family caregivers.

2. Test the effects of telephone-based ACT on patient fatigue interference and caregiver burden (primary outcomes) and patient and caregiver quality of life (secondary outcomes).

Hypothesis: ACT will lead to improved primary and secondary outcomes as compared to education/support.
Study Flow

Screening for eligibility

Baseline assessment

Randomization

6 ACT sessions over ~6 weeks

Follow-up #1
(2 weeks post-intervention)

Follow-up #2
(3 months post-intervention)

6 Education/support sessions over ~6 weeks

Follow-up #1
(2 weeks post-intervention)

Follow-up #2
(3 months post-intervention)
# Intervention Components

<table>
<thead>
<tr>
<th>Acceptance and Commitment Therapy</th>
<th>Education/Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Mindfulness exercises</td>
<td>• Orientation to their medical center and treatment team</td>
</tr>
<tr>
<td>• Goal-setting aligned with personal values</td>
<td>• Discussion of quality-of-life concerns and resources</td>
</tr>
<tr>
<td>• Learning adaptive coping skills (e.g., acceptance, perspective-taking)</td>
<td>• Tips for evaluating health information</td>
</tr>
</tbody>
</table>
Feasibility and Acceptability

Feasibility:

• 54% eligibility screening rate for reached patients (96% for caregivers)
• 100% of eligible patients and caregivers consented
• 81% retention at 2 weeks and 73% retention at 3 months post-intervention

Acceptability: High helpfulness ratings for ACT

• Patient mean = 4.17/5.00, SD = .87
• Caregiver mean = 4.41/5.00, SD = .59
Mean Changes and Effect Sizes for Patient Outcomes
\((Ns = 29-32)\)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>ACT</th>
<th>Education/Support</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean change</td>
<td>Within-group ES</td>
</tr>
<tr>
<td>Fatigue interference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline to 2 weeks</td>
<td>-4.29</td>
<td>-0.46</td>
</tr>
<tr>
<td>Baseline to 3 months</td>
<td>-2.86</td>
<td>-0.31</td>
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<tr>
<td>Physical quality of life</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline to 2 weeks</td>
<td>3.14</td>
<td>0.71</td>
</tr>
<tr>
<td>Baseline to 3 months</td>
<td>-1.07</td>
<td>-0.18</td>
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<tr>
<td>Mental quality of life</td>
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<td></td>
</tr>
<tr>
<td>Baseline to 2 weeks</td>
<td>2.79</td>
<td>0.32</td>
</tr>
<tr>
<td>Baseline to 3 months</td>
<td>3.71</td>
<td>0.49</td>
</tr>
</tbody>
</table>

ACT = acceptance and commitment therapy. ES = effect size.
# Mean Changes and Effect Sizes for Caregiver Outcomes

\( (Ns = 29-32) \)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>ACT</th>
<th>Education/Support</th>
<th>Within-group ES</th>
<th>Within-group ES</th>
<th>Between-group ES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean change</td>
<td>Within-group ES</td>
<td>Mean change</td>
<td>Within-group ES</td>
<td>Between-group ES</td>
</tr>
<tr>
<td><strong>Caregiver burden</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline to 2 weeks</td>
<td>-2.27</td>
<td>-0.74</td>
<td>-1.44</td>
<td>-0.24</td>
<td>-0.17</td>
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<tr>
<td>Baseline to 3 months</td>
<td>-1.36</td>
<td>-0.26</td>
<td>-0.20</td>
<td>-0.03</td>
<td>-0.18</td>
</tr>
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<td><strong>Physical quality of life</strong></td>
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<tr>
<td>Baseline to 2 weeks</td>
<td>1.83</td>
<td>0.46</td>
<td>0.56</td>
<td>0.11</td>
<td>0.27</td>
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<tr>
<td>Baseline to 3 months</td>
<td>2.12</td>
<td>0.49</td>
<td>0.03</td>
<td>0.01</td>
<td>0.41</td>
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<tr>
<td><strong>Mental quality of life</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline to 2 weeks</td>
<td>2.85</td>
<td>0.47</td>
<td>0.97</td>
<td>0.25</td>
<td>0.37</td>
</tr>
<tr>
<td>Baseline to 3 months</td>
<td>2.08</td>
<td>0.33</td>
<td>1.35</td>
<td>0.29</td>
<td>0.13</td>
</tr>
</tbody>
</table>

ACT = acceptance and commitment therapy. ES = effect size.
Discussion

1. **Feasibility**: Enrollment and retention rates were above average compared to prior trials with cancer patient-caregiver dyads.

2. **Acceptability**: Average helpfulness ratings for ACT were high.

3. **Promise**: Effect sizes suggest that ACT shows promise in improving patient and caregiver functional and quality-of-life outcomes.

(Song et al., 2021)
Future Directions

- Large-scale efficacy trials of acceptance and commitment therapy for patients and caregivers coping with advanced cancer.

If found to be efficacious, ACT could be disseminated to clinicians and fulfill an unmet need in the comprehensive care of this population.
Acknowledgements

• This work was supported by the National Cancer Institute (R21CA235788: PI: Mosher).

• Study co-investigators and consultants:
  • Jonathan Bricker, Ph.D.
  • Victoria Champion, Ph.D., RN, FAAN
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  • Bert O’Neil, M.D.
  • Wei Wu, Ph.D.

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  • Kelly Chinh, Ph.D.
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  • Medical teams at Indiana University Simon Comprehensive Cancer Center and Eskenazi Health
References


References


References


Cathy J. Bradley, PhD

Emotional and Financial Health of Caregivers of Patients with Cancer
Emotional and financial needs of employed caregivers  
eCare: A virtual stress management intervention for  
employed caregivers of solid tumor cancer patients  
R01CA231387

Cathy J. Bradley, PhD  
Deputy Director, University of Colorado Cancer Center  
Associate Dean for Research, Colorado School of Public Health
Profile of a caregiver

- 88% of caregivers care for a family member\(^1\)
- 39% lived with the person they cared for\(^1\)
- 50% reported high emotional stress\(^1\)
- 72% assisted with medical tasks\(^1\)
- 43% reported needing help with emotional and physical stress\(^1\)
- 50% were employed working an average of 35 hours per week\(^1\)

“If society wants us to keep caring for others, it’s going to have to show a little more care for us.”
Kate Washington, the author of “Already Toast: Caregiving and Burnout in America”\(^2\)
Employed caregivers

- Caregiver employment is crucial
  - Financial support
  - Health insurance coverage – possibly the only coverage for the patient and family
- Nearly all report work time lost
- Increased risk of
  - leave without pay,
  - fewer work hours,
  - in lower-paying jobs
  - working from home (if possible) to manage caregiving duties

Cancer caregiving is more time consuming

<table>
<thead>
<tr>
<th>Hours of Care per Week (2014)</th>
<th>Cancer Caregiver (n=111)</th>
<th>Non-Cancer Caregiver (n=1,164)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fewer than 9 hours</td>
<td>32%</td>
<td>47%*</td>
</tr>
<tr>
<td>9 to 20 hours</td>
<td>24%</td>
<td>21%</td>
</tr>
<tr>
<td>21 to 40 hours</td>
<td>13%</td>
<td>19%</td>
</tr>
<tr>
<td>41 or more hours</td>
<td>32%</td>
<td>22%</td>
</tr>
<tr>
<td>Average hours of care provided per week</td>
<td>32.9*</td>
<td>23.9</td>
</tr>
</tbody>
</table>


Prevent and conquer cancer. Together.
In the workplace

- Most employers do not:
  - Have awareness of how responsibilities differ by gender and ethnicity
  - Understand costs of caregiving on an employee
  - Understand toll caregiving has on performance
  - Believe support for caregivers improves bottom line or helps them to attract talent

- No business case to support employees who are caregivers

Largest U.S. companies’ support of parents compared to family caregivers, 2020.

Financial toxicity extends to caregivers

- Caregiver financial toxicity associated with:
  - Greater patient care non-adherence
  - Lifestyle altering behaviors for patients and caregivers
  - Decreased quality of life for patients and caregivers

“Correlates of financial toxicity in adult cancer patients and their informal caregivers” (Sadigh et al. 2021)

Cancer caregiving has a greater economic toll

- Using 2000-2018 Health and Retirement Study, examined impact of caregiving for a cancer spouse
- More cancer caregivers reported
  - Income decrease
  - Debt increase
  - Stopped working

Economic Impact of Cancer Caregiving Compared to Non-Cancer Caregiving

Notes: Sample includes all caregivers working prior to caregiving. N=1,488; 231 cancer caregivers.
Mental health impact on employed caregivers

- Cancer caregivers who identified as Hispanic and Other reported the most mental health impacts
- Non-Hispanic White reported the least mental health impacts

Mental Health Impact of Cancer Caregiving by Race/Ethnicity

Notes: Sample includes only cancer caregivers. N = 775 non-Hispanic White, 116 non-Hispanic Black, 54 Hispanic, 46 other race
Employed caregivers and mental health

• Association between employment change and depression and anxiety in Allo-HSCT caregivers\(^7\)
  • 45% of employed caregivers reported a reduction in employment
  • Those who reduce employment had greater levels of anxiety and depression\(^7\)

Unclear how to interpret:

1. Sicker patients, requiring more care
2. No support at home or the ability to hire help
3. Unsupportive work environments
4. Desire to remain employed
eCare: a Virtual Stress Management Intervention for employed caregivers

- Psycho-Education Paced Respiration and Relaxation (PEPRR) reduced distress among caregivers of adult Allo-HSCT patients in a randomized control trial (RCT)^8
- Mobilized Psychoeducation and Skills Based Intervention (Pep-Pal) is the mobile version of PEPRR, which was an acceptable alternative to PEPRR^9

- **Randomized controlled trial with 3 arms**
  - Virtual Psycho-Education and Paced Respiration and Relaxation (PEPRR) includes virtual sessions with a social worker and workbook
  - Web-based Pep-Pal, a self-guided, virtual workbook
  - Treatment as usual
eCare: Inclusion criteria

**Caregiver Criteria**

- Caregiver for a patient with a diagnosis of solid tumor cancer at any stage within 12 weeks of initiating treatment; must live with patient
- Caregiver scored 1+ on the PHQ-2 (depression) and/or GAD-2 (anxiety)
- Caregiver employed at the time of the patient's diagnosis for 20+ hours/week
- Age 25-64

**Patient Criteria**

- Primary diagnosis of solid tumor within 12 weeks of initiating treatment including chemotherapy, immunotherapy, oral targeted and/or radiation.
- Spouse or partner of the caregiver for at least a year and must live with caregiver.
- Must be able to read/speak English
- Age 18+
Primary & secondary endpoints

• **Primary outcomes**: Reduction in caregiver depressive symptoms

• **Secondary psychological and medical outcomes**: Reduction in caregiver baseline to 3, 6, 9, 12 months in other indicators of distress, health care utilization at 12 months

• **Employment outcome**
  • **Employed caregivers** - hours worked and job satisfaction will be positively associated with improved patient symptom management and patient psychological outcomes
Secondary endpoints

- **Secondary caregiver biomarker outcomes**: Stabilized or reduced biomarkers of allostatic load from baseline to 3, 6, 9, and 12 months
  - Hair cortisol and telomere length tested
  - Hair is collected by participants from the posterior vortex
  - Saliva is collected by participants

- Biomarker correlation with PROMIS, CESD, PSS and employment outcomes
eCare: Progress to date

Caregivers

- Total number enrolled: 70, aiming for 300
- Mean Age: 49
- Sex:
  - Male – 55%
  - Female – 45%
- Hispanic or Latino – 10%
- College degree or greater – 92%
- Household Income above $105,000 – 74%
eCare: Baseline symptoms

- CES-D score 16 or above signifies significant depressive symptoms
  - 87% exceeded threshold for depression
- PSS scores 27 and above is considered high perceived stress
  - 60% exceeded threshold for stress
- STAI-S scores 38-44 signify moderate anxiety, and 45-80 as high anxiety
  - 43% exceed threshold for anxiety
eCare: PROMIS depression and anxiety comparison

• **PROMIS Depression** – mean score of 54.3
  • 25% mild depression
  • 23% moderate depression
  • 2% severe depression

• **PROMIS Anxiety** – mean score of 59.4
  • 30% mild anxiety
  • 32% moderate anxiety
  • 8% severe anxiety

• Much lower levels compared to CESD, PSS, STAI-S
eCare: Continuation

• Enrollment
  • Enlisted Kaiser Permanente of Colorado
  • Anticipate half of the sample enrolled by fall
  • Completion by next year

• Dissemination and implementation
  • Health and Retirement Survey analysis
  • ASHEcon presentation June 2022
eCare: Continuation

- Inform practice and standard of care
- Inform policies such as paid sick leave by making the needs of employed caregivers known to providers, employers, and caregivers

Here’s how:
- Collaboration with Center for Worker Health and Environment to inform workplaces of patients and caregiver needs
- Collaboration with Cariloop; a caregiver support organization that is developing workplace modules as part of a benefit package for caregivers
  - First evidence that an intervention improves caregiver well-being
  - Retention and job satisfaction
  - Business case for caregiver support
THANK YOU & QUESTIONS
@CathyjBradley
References


Jae Kim, MD

A Self-Management Intervention for Lung Cancer Surgery Patients and Family Caregivers
A Multi-Media Self-Management Intervention for Lung Cancer Surgery Patients and Family Caregivers

Jae Y. Kim, MD
Associate Professor and Chief
Division of Thoracic Surgery
Department of Surgery
Disclosures

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- Advisory board/speaking fees – Astrazeneca
Background

- Lung cancer is the leading cause of cancer death
- Surgery is the most common curative treatment
- QOL Impact
  - Comorbidities are common among pts and FCGs
  - Short and long term side effects of lung cancer treatments
  - High level of caregiver burden
Interdisciplinary Palliative Care for Patients with Lung Cancer (B. Ferrell PI)

- Usual care vs. interdisciplinary palliative care intervention + nurse led educational sessions.
- Early and late stage disease
- 491 patients and 354 FCGs

Betty Ferrell, MSN, PhD
# Interdisciplinary Palliative Care for Patients with Lung Cancer

## Table 2

Multivariate Analysis of Main Outcomes at 12 Weeks, Controlling for Baseline

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Usual Care</th>
<th>Intervention</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>( \bar{x} \pm SD )</td>
<td>( \bar{x}^a )</td>
</tr>
<tr>
<td>FACT-L (range = 0-140; higher = better QOL)</td>
<td></td>
<td></td>
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<tr>
<td>Early</td>
<td>102</td>
<td>93.7 ± 20.6</td>
<td>97.7</td>
</tr>
<tr>
<td>Late</td>
<td>91</td>
<td>105.3 ± 20.1</td>
<td>105.2</td>
</tr>
<tr>
<td>Total</td>
<td>193</td>
<td>99.2 ± 21.1</td>
<td>101.4</td>
</tr>
<tr>
<td>Lung Cancer Subscale (range = 0-32; higher = better QOL)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Early</td>
<td>105</td>
<td>22.2 ± 4.8</td>
<td>23.1</td>
</tr>
<tr>
<td>Late</td>
<td>106</td>
<td>24.7 ± 5.1</td>
<td>24.8</td>
</tr>
<tr>
<td>Total</td>
<td>211</td>
<td>23.4 ± 5.1</td>
<td>23.9</td>
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<tr>
<td>Trial Outcome Index (range = 0-136; higher = better QOL)</td>
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<tr>
<td>Early</td>
<td>105</td>
<td>56.3 ± 13.1</td>
<td>58.4</td>
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<tr>
<td>Late</td>
<td>106</td>
<td>63.4 ± 14.0</td>
<td>63.5</td>
</tr>
<tr>
<td>Total</td>
<td>211</td>
<td>59.9 ± 14.0</td>
<td>60.1</td>
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<tr>
<td>Physical well-being (range = 0-28; higher = better QOL)</td>
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<tr>
<td>Early</td>
<td>105</td>
<td>19.5 ± 6.2</td>
<td>20.2</td>
</tr>
<tr>
<td>Late</td>
<td>106</td>
<td>21.2 ± 6.2</td>
<td>21.4</td>
</tr>
<tr>
<td>Total</td>
<td>211</td>
<td>20.3 ± 6.2</td>
<td>20.8</td>
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<tr>
<td>Social/family well-being (range = 0-28; higher = better QOL)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Early</td>
<td>105</td>
<td>20.4 ± 6.9</td>
<td>21.9</td>
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<tr>
<td>Late</td>
<td>105</td>
<td>24.1 ± 4.3</td>
<td>23.8</td>
</tr>
<tr>
<td>Total</td>
<td>211</td>
<td>22.3 ± 6.0</td>
<td>22.9</td>
</tr>
</tbody>
</table>

\( \bar{x}^a \): Adjusted mean

Ferrell et al. J Pain Symptom Management. 2015
**Interdisciplinary Palliative Care for Patients with Lung Cancer**

**TABLE 3. Multivariate Analysis of Family Caregiver Psychological Distress and Quality of Life by Group and Disease Stage**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Usual Care Group (N = 157)</th>
<th>Intervention Group (N = 197)</th>
<th>$P_{\text{Main}}$</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Mean Score</td>
<td>SD</td>
<td>Adjusted Mean</td>
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<tr>
<td><strong>Psychological distress</strong></td>
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<td></td>
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<tr>
<td>Early, stages I-III</td>
<td>4.87</td>
<td>2.87</td>
<td>4.90</td>
</tr>
<tr>
<td>Late, stage IV</td>
<td>4.40</td>
<td>2.89</td>
<td>4.54</td>
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<tr>
<td>Total</td>
<td>4.61</td>
<td>2.88</td>
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<tr>
<td><strong>Physical QOL</strong></td>
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<tr>
<td>Early, stages I-III</td>
<td>7.07</td>
<td>1.76</td>
<td>7.08</td>
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<tr>
<td>Late, stage IV</td>
<td>7.06</td>
<td>1.78</td>
<td>7.22</td>
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<tr>
<td>Total</td>
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<tr>
<td><strong>Psychological QOL</strong></td>
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<tr>
<td>Early, stages I-III</td>
<td>5.38</td>
<td>1.69</td>
<td>5.43</td>
</tr>
<tr>
<td>Late, stage IV</td>
<td>5.13</td>
<td>1.57</td>
<td>5.35</td>
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<tr>
<td>Total</td>
<td>5.24</td>
<td>1.62</td>
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<tr>
<td><strong>Social QOL</strong></td>
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<tr>
<td>Early, stages I-III</td>
<td>5.84</td>
<td>1.98</td>
<td>5.81</td>
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<tr>
<td>Late, stage IV</td>
<td>6.13</td>
<td>1.80</td>
<td>6.21</td>
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<td>6.00</td>
<td>1.89</td>
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<td><strong>Spiritual QOL</strong></td>
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<tr>
<td>Early, stages I-III</td>
<td>6.67</td>
<td>1.79</td>
<td>6.56</td>
</tr>
<tr>
<td>Late, stage IV</td>
<td>6.43</td>
<td>1.81</td>
<td>6.53</td>
</tr>
<tr>
<td>Total</td>
<td>6.54</td>
<td>1.80</td>
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<tr>
<td><strong>Total QOL</strong></td>
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<td></td>
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</tr>
<tr>
<td>Early, stages I-III</td>
<td>5.97</td>
<td>1.48</td>
<td>5.98</td>
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<tr>
<td>Late, stage IV</td>
<td>5.90</td>
<td>1.38</td>
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<tr>
<td>Total</td>
<td>5.93</td>
<td>1.42</td>
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</table>
QOL Trajectories After Surgery

Fig. 2. Patient and Family Caregiver Psychological Distress Over Time. Possible scores range from 0 to 10. *p < 0.05.
QOL Trajectories After Surgery

Patient QOL over time

FCG QOL over time

Higher QOL

Lower QOL

Baseline 6 Weeks 12 Weeks

Physical QOL*
Social QOL
Emotional QOL*

Baseline 6 Weeks 12 Weeks

Physical QOL
Social QOL
Emotional QOL
FCGs in Lung Cancer Surgery

- Palliative care intervention less effective for FCGs than patients
- High level of caregiver burden

- Trajectory and Chronicity
  - Multiple transitions of care
  - Opportunity for anticipatory intervention
  - Different paradigm
Designing a QOL Intervention for FCGs

- Chronic care model of self-management
  - Reactive → Proactive
  - Social cognitive theory:
    - Goal setting
    - Skills building
    - Problem solving
- Begin intervention pre-op (anticipatory)
- Multimedia
  - Video, handbook, telephone

Virginia Sun, RN, MSN, PhD
Conceptual Framework

**Moderators**
- Age
- Sex
- Marital status
- FCG/patient relationship
- Employment status
- Co-morbidities

**Chronic Care Self-Management**
- Goal setting
- Proactive planning
- Problem-solving
- Self-management skills for recovery and caregiving

**Outcome Mediators**
- ↑ Activation
- ↑ Self-Efficacy
- ↑ Knowledge

**FCG Outcomes**
- ↓ Distress
- ↓ Caregiver Burden
- ↑ Preparedness
- ↑ QOL

**Patient Outcomes**
- ↓ Distress
- ↓ ER visits/readmissions
- ↓ In-home nursing care
- ↑ QOL
Pilot Study of Dyadic Intervention for LC Surgery

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<thead>
<tr>
<th>Component</th>
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Pilot Study of Dyadic Intervention for LC Surgery

- 38 patients and 22 FCGs
- Feasible and acceptable
- Mean patient acceptability/usability rating = 3.6-3.7/4.0
- Mean FCG acceptability/usability rating = 3.1-3.6/4.0. Desire for more content on supporting caregivers’ emotional well-being and self-management.
Randomized Controlled Trial of MSM Intervention

1. Randomize FCGs and Patients Scheduled for Lung Cancer Surgery (200 dyads)

   - **SESSION 1**
     - Multimedia Self-Management Intervention
     - Attention Control

   - **SESSION 2**
     - Multimedia Self-Management Intervention
     - Attention Control

   - **SESSIONS 3, 4, 5**
     - DISCHARGE
     - Phone Support

- Phone Follow-up
Randomized Controlled Trial of MSM Intervention

Table 2. Outcome Measures by Aims and Assessment Time Points

<table>
<thead>
<tr>
<th>Family Caregivers</th>
<th>Measures</th>
<th>Baseline</th>
<th>Discharge</th>
<th>1 month</th>
<th>3 months</th>
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<td>Montgomery Borgatta Caregiver Burden Scale</td>
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<td>Preparedness for Caregiving Scale</td>
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<td>COH-QOL-Family</td>
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<td>Family Caregiver Healthcare Use Survey</td>
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<td>Patient Activation Measure (PAM)</td>
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<td>Surgery-Related Knowledge Tool</td>
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Progress to Date

- Month 42/54 of accrual
- 139 dyads accrued (goal = 200)
- COVID 19
  - Accrual (electronic consent, expanded cohort)
  - Impact on caregiving
Acknowledgements

- Virginia Sun, PhD, MSN, RN
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- Xiaoke Zou, MS
- Rosemary Prieto, RN, BSN
- Jacqueline Carranza, BS, CRA
- Jovani Barajas, BA, CRA
- Helen Truong, RN, BSN
Questions?
Please type your questions in the Q & A section on WebEx

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ICF, Outcomes Research Branch
Healthcare Delivery Research Program
Division of Cancer Control and Population Sciences
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Supporting the Science of Informal Cancer Caregiving:
Highlights of NCI-Funded Research