LUNG CANCER PATIENT SUPPORT ECHO SESSION 11
MANAGING COMORBIDITIES AND LONG-TERM SYMPTOMS

KEVIN OEFFINGER, MD
MICHAEL STUBBLEFIELD, MD

ROBERT SMITH, PHD (FACILITATOR)
MARCH 28, 2019
9:00 AM ET
TODAY’S AGENDA

<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00-9:10</td>
<td>Welcome, roll call, housekeeping</td>
<td>Robert Smith, Ph.D.</td>
</tr>
<tr>
<td>9:10-9:45</td>
<td>Didactic Presentation: ECHO Session 11</td>
<td>Kevin Oeffinger, MD, Michael Stubblefield, MD</td>
</tr>
<tr>
<td>9:45-10:00</td>
<td>Q &amp; A/Discussion</td>
<td>All led by facilitator</td>
</tr>
<tr>
<td>10:00-10:15</td>
<td>Program/Case Presentation:</td>
<td>Michael Stubblefield</td>
</tr>
<tr>
<td>10:15-10:25</td>
<td>Q &amp; A/Discussion</td>
<td>All led by facilitator</td>
</tr>
<tr>
<td>10:25-10:30</td>
<td>Conclusion/Next session</td>
<td>Robert Smith</td>
</tr>
</tbody>
</table>

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*Please mute phones when not speaking. Mute cell phones and try to reduce extraneous noise.
*Remember to e-mail Octavia Vogel by 4/4 if you are requesting CME/CEU credit.
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The following planners and faculty disclose that they have no financial relationships with any commercial interest: (next slide)
FACILITATOR & PRESENTERS

Presenters:  
Kevin Oeffinger, MD  
Director, Duke Center for Onco-Primary Care  
Director, Duke Supportive Care and Survivorship Center  
Duke Cancer Institute  
Professor of Medicine, Division of Medical Oncology  
Department of Medicine, Duke University Medical Center  

Michael D. Stubblefield, M.D.  
Medical Director for Cancer Rehabilitation – Kessler Institute for Rehabilitation  
National Medical Director for ReVital Cancer Rehabilitation  
Select Medical Clinical Professor  
Department of Physical Medicine and Rehabilitation  
Rutgers New Jersey Medical School  

Facilitator:  
Robert Smith, Ph.D.  
Vice President, Cancer Screening, Prevention and Early Detection  
American Cancer Society  

Case Presentation:  
Grady Health System
LEARNING OBJECTIVES

Upon completion of this session participants will be able to:

1. Recognize the importance of comorbidity management in lung cancer patients.
2. Explore methods to integrate primary care physicians during active therapy to manage comorbidities and prepare for survivorship.
3. Identify the common functional complications seen in lung cancer survivors.
4. Develop a plan to maximize function and quality of life in lung cancer survivors with functional issues.
MANAGING COMORBIDITIES AND BRINGING THE PCP BACK INTO CANCER CARE

KEVIN OEFFINGER, MD
DUKE CANCER INSTITUTE / DUKE UNIVERSITY
WHY PAY ATTENTION TO COMORBIDITIES?  
BREAST CANCER AS A MODEL

Probability of death from breast cancer or other causes among women age 50 and older with ER+ early stage breast cancer  
SEER: 1988-2001


Percent of women with early stage breast cancer and a cardiovascular risk factor  


ADHERENCE TO MEDICATIONS FOR COMORBIDITIES

Percent of breast cancer survivors adherent to their statin therapy prior to and following early stage breast cancer diagnosis and treatment (Group Health 1990-2008, N=4,221 women)

Improved adherence was associated with comorbidity management by a PCP

Most women with breast cancer will not die of breast cancer.

Continued monitoring and management of common comorbidities may be as important for longevity / QoL as treatment of the breast cancer.

Lack of standardized approaches to manage hypertension, diabetes, and lipid disorders.
Hypertension (pre/during/post cancer) is a key risk factor in development of heart failure in cancer survivors treated with cardiotoxic therapy

Studies pre new AHA / ACC guidelines for HTN
- <120 / <80

To date, no intervention studies aimed at blood pressure management during / after cancer therapy

Other comorbidities associated with an increased risk of poor outcomes
WHAT ABOUT LUNG CANCER PATIENTS

Are comorbidities associated with long-term survival of lung cancer? A population-based cohort study from French cancer registries

A. Seigneurin¹,²,³*, P. Delafosse¹, B. Trétarre⁴, A. S. Woronoff⁵, M. Velten⁶, P. Grosclaude⁷,⁸, A. V. Guizard⁹, B. Lapôtre-Ledoux¹⁰, S. Bara¹¹, F. Molinié¹² and M. Colonna¹
## RISK OF HOSPITALIZATION FOLLOWING LUNG CANCER

Denmark: 1997 – 2014 – all lung cancer survivors

### Diagnostic Group

<table>
<thead>
<tr>
<th>Diagnostic Group</th>
<th>No. of Events</th>
<th>HR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infections</td>
<td>1052</td>
<td>2.42 (2.27-2.58)</td>
</tr>
<tr>
<td>New primary cancer</td>
<td>780</td>
<td>1.02 (0.95-1.10)</td>
</tr>
<tr>
<td>Blood</td>
<td>950</td>
<td>3.52 (3.29-3.76)</td>
</tr>
<tr>
<td>Endocrine system</td>
<td>1294</td>
<td>2.24 (2.11-2.37)</td>
</tr>
<tr>
<td>Nervous system</td>
<td>2045</td>
<td>1.51 (1.45-1.58)</td>
</tr>
<tr>
<td>Circulatory system</td>
<td>2176</td>
<td>1.68 (1.61-1.76)</td>
</tr>
<tr>
<td>Respiratory system</td>
<td>3045</td>
<td>5.85 (5.63-6.07)</td>
</tr>
<tr>
<td>Digestive system</td>
<td>1816</td>
<td>1.69 (1.61-1.77)</td>
</tr>
<tr>
<td>Skin and subcutaneous tissue</td>
<td>512</td>
<td>1.49 (1.36-1.63)</td>
</tr>
<tr>
<td>Musculoskeletal system</td>
<td>1550</td>
<td>1.19 (1.13-1.25)</td>
</tr>
<tr>
<td>Genitourinary system</td>
<td>1108</td>
<td>1.27 (1.19-1.35)</td>
</tr>
</tbody>
</table>

Kjaer TK, et al. JAMA Oncology, 2019
STATIN USE ASSOCIATED WITH IMPROVED SURVIVAL

SEER-Medicare 2007-2011

<table>
<thead>
<tr>
<th>Statin exposure&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Squamous-cell carcinoma</th>
<th></th>
<th>Adenocarcinoma</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HR</td>
<td>95% CI</td>
<td>P&lt;sup&gt;a&lt;/sup&gt;</td>
<td>HR</td>
</tr>
<tr>
<td>Overall use&lt;sup&gt;c&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>1</td>
<td></td>
<td>0.1</td>
<td>1</td>
</tr>
<tr>
<td>Short-term</td>
<td>0.93</td>
<td>0.85 to 1.01</td>
<td>0.1</td>
<td>1.02</td>
</tr>
<tr>
<td>Long-term</td>
<td>0.68</td>
<td>0.59 to 0.79</td>
<td>&lt;0.001</td>
<td>0.78</td>
</tr>
</tbody>
</table>

Adjusted for stage, grade, age, race/ethnicity, chemotherapy, radiation, COPD, and other comorbidities

Ung MH, et al. Lung Cancer, 2018
Many individuals with Stage I-II lung cancer will not die of lung cancer.

Stage III-IV: manage the cancer but lose the patient to a cardiac event.

Lung cancer survivors have an excess risk of multiple comorbidities.

Continued monitoring and management of common comorbidities is important for longevity.

Who should manage the comorbidities?
Systematic review of 35 articles: **10,941 PCPs**

- 45% involved during cancer treatment
- 70-80% during survivorship
- 95% preferred a more active role across phases
- 50% felt unprepared to manage late effects
- Rarely and inconsistently received sufficient information from oncologists

Duke Center for Onco-Primary Care

- Implementing a blood pressure management algorithm for cancer care
- Piloting Bluetooth home blood pressure monitoring with automated messaging to PCP, patient, and oncologist

Downstream benefits:
- Patient understands importance of comorbidities
- PCP is more familiar with cancer care, enhancing the transition to survivorship
THANK YOU!

You may email questions to:

Kevin.Oeffinger@duke.edu
MANAGING FUNCTIONAL ISSUES IN LUNG CANCER

Michael D. Stubblefield, M.D.
Medical Director for Cancer Rehabilitation – Kessler Institute for Rehabilitation
National Medical Director for ReVital Cancer Rehabilitation – Select Medical
Clinical Professor, Department of Physical Medicine and Rehabilitation – Rutgers New Jersey Medical School
COMMON FUNCTIONAL ISSUES IN LUNG CANCER SURVIVORS

- Fatigue
- Dyspnea
- Pain
- Balance Dysfunction/Falls
WHAT IS CANCER REHABILITATION?

A process that helps cancer survivor obtain and maintain the maximal possible physical, social, psychological, and vocational functioning within the limits created by cancer and its treatments.
COMPONENTS OF COMPREHENSIVE CANCER REHABILITATION

- Rehabilitation Medicine
- Pain and Palliative Care
- Anesthesia Pain
- Orthopedic Surgery
- Medical Oncology
- Integrative Medicine
- Physical Therapy
- Occupational Therapy
- Speech Language Pathology
- Lymphedema Therapy
CANCER SURVIVORSHIP IN CONTEXT

- 15.5 million cancer survivors in 2016\(^1\)
- 20.3 million cancer survivors by 2026\(^1\)
- 282,000 spinal cord injury survivors in 2016\(^2\)
- Approximately 68% of persons diagnosed with cancer today can expect to live at least 5 years after diagnosis compared with only 49% in the 1970’s and 35% in the 1950’s.\(^3\)


\(^2\)Spinal Cord Injury (SCI Facts and Figures at a Glance. Accessible at: https://www.nscisc.uab.edu/Public/Facts%202016.pdf

ESTIMATED AND PROJECTED NUMBER OF CANCER SURVIVORS IN THE UNITED STATES FROM 1977 TO 2022 BY YEARS SINCE DIAGNOSIS

“Treatment rates for physical impairments, even those that are easily treatable, are as low as 1% to 2% for cancer patients.”
SYMPTOMS IN ADVANCED LUNG CANCER

Figure 1 Percentage of Patients Reporting Frequent or Constant Symptoms in 2002 and 2012

- Pain: 20% (2002) vs 26% (2012)
- Fatigue: 42% (2002) vs 37% (2012)
- Poor Concentration: 11% (2002) vs 6% (2012)
- Anxiety: 34% (2002) vs 28% (2012)
- Depression: 15% (2002) vs 15% (2012)
- Hardships on Family: 18% (2002) vs 15% (2012)

IMPACT OF DYSPNEA, PAIN AND FATIGUE ON LIFE ACTIVITIES OF LUNG CANCER PATIENTS

Fatigue
Cancer-related fatigue is a distressing, persistent, subjective sense of physical, emotional, and/or cognitive tiredness or exhaustion related to cancer or cancer treatment that is not proportional to recent activity and interferes with usual functioning.

SYMPTOMS OF CANCER RELATED FATIGUE

A subjective experience

- Feeling tired, weary, exhausted even after a good night’s sleep
- Lack of energy/prolonged tiredness after activity
- Weakness, heaviness in arms/legs
- Listlessness or irritability
- Trouble starting or finishing tasks due to tiredness
- Needing to sleep during day
- Unable to do usual.desired activities
- Too tired to eat
- Difficulty with concentration & memory
- Limiting social activities due to tiredness

Most commonly occurs with other symptoms

- Pain, emotional distress, anemia, sleep disturbances in clusters

ONCOLOGY SECTION, AMERICAN PHYSICAL THERAPY ASSOCIATION: CANCER-RELATED FATIGUE FACT SHEET FOR CONSUMERS. AVAILABLE AT WWW.ONCOLOGYPT.ORG.
NATIONAL COMPREHENSIVE CANCER NETWORK. CANCER RELATED FATIGUE (VERSION 2.2018).
WWW.NCCN.ORG/PROFESSIONALS/PHYSICIAN_GLS/PDF/FATIGUE.PDF
IMPACT OF CANCER RELATED FATIGUE

Extremely common
- Nearly universal with chemo, RT, BMT or biologic agents
- 80% of patients receiving chemo &/or radiation
- ≥ 75% in patients with metastatic disease

Persistent & disruptive across cancer continuum
- Mod/severe in 45% during treatment; 29% in remission

Most distressing cancer & treatment related symptom

Under-reported, under-diagnosed & under-treated

NATIONAL COMPREHENSIVE CANCER NETWORK. CANCER RELATED FATIGUE (VERSION 2.2018). HTTPS://WWW.NCCN.ORG/PROFESSIONALS/PHYSICIAN_GLS/PDF/FATIGUE.PDF.
### Factors Contributing to Fatigue

#### Physiologic/Biologic
- Anemia
- Inflammatory response / cytokines
- Cachexia
- Immune function
- Endocrine function
- Comorbidities

#### Cancer-Related
- Tumor burden
- Uncontrolled pain, dyspnea, dysphagia, odynophagia
- Neurological deficits
- Cancer therapies: RT, chemo, hormonal, immunologic, surgery

#### Sleep Disorders
- Hypersomnia
- Insomnia
- Poor sleep hygiene
- Other sleep dysfunction (Apnea, restless leg syndrome)

#### Nutrition
- Malnutrition
- Fluid/ electrolyte disturbance
- Vitamin deficiencies

#### Psychosocial
- Depression / distress
- Anxiety
- Employment status
- Activity levels
- Cognition

#### Medication Effects
- Beta blockers
- Chemotherapeutic agents
- Opiate-induced sedation
- Corticosteroids

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Narayanan S, Escalante CP. Clinical assessment and management of cancer-related fatigue. JCOM. 2017 May;24(5).


SCREENING FOR CANCER RELATED FATIGUE

- Screen all patients
  - At diagnosis/initial visit
  - Regular intervals during & following treatment
  - As clinically indicated, at least annually

- Perform & document quantitatively

![Fatigue Severity Scale]

NATIONAL COMPREHENSIVE CANCER NETWORK. CANCER RELATED FATIGUE (VERSION 2.2018). WWW.NCCN.ORG/PROFESSIONALS/PHYSICIAN_GLS/PDF/FATIGUE.PDF.

ASCO GUIDELINE ADAPTATION OF PAN-CANADIAN GUIDELINE ON SCREENING, ASSESSMENT AND CARE OF CANCER-RELATED FATIGUE IN ADULTS WITH CANCER, THE NCCN CLINICAL PRACTICE GUIDELINES IN ONCOLOGY (NCCN GUIDELINES®) FOR CANCER-RELATED FATIGUE, AND THE NCCN GUIDELINES® FOR SURVIVORSHIP.
SCREENING, ASSESSMENT & MANAGEMENT OF CANCER RELATED FATIGUE

Cancer-related fatigue

- Screening (numeric rating scale)
  - 0–3
    - Re-evaluation on regular basis
  - 3–10
    - Primary evaluation
      - If precipitating condition identified
        - Management of underlying conditions (e.g., anemia, medical, comorbidities)
      - If no precipitating condition identified
        - Ongoing evaluation
          - Energy conservation
          - Psychosocial support
          - Exercise
          - Sleep
          - Pharmacologic agents
          - Complementary therapies

EXERCISE IN CANCER RELATED FATIGUE

- Category 1
- Maintain optimal activity level
- Initiate / maintain exercise program
  - 150 min/week aerobic + 2-3/week strength training
  - Beware of precautions / contraindications (bony mets, thrombocytopenia, anemia, fever, fall risk, etc.)
- Rehabilitation referral as appropriate (PM&R, PT, OT)

“Evidence...overwhelmingly supports a significant benefit from exercise in reducing CRF” ~Stout et al., 2017 p. S371
Dyspnea
PULMONARY REHABILITATION

- Pulmonary rehabilitation (PR) is an evidence-based, multidisciplinary comprehensive exercise program targeted to patients with symptomatic chronic respiratory dysfunction.

- The goal of PR is to optimize pulmonary function and thus the patient’s ability to function despite disease.

- PR integrates exercise and educational interventions into an individualized treatment program.

- A standard PR protocol consists of three sessions of 30-90 minutes per week for 6-8 weeks consisting of individualized aerobic exercise and strength training.

- Training modalities include treadmill, stationary bicycle, NU-Step, upper body resistance training and training in breathing techniques.

TIMING OF PULMONARY REHABILITATION (PR)

- Before surgery (prehabilitation)
- After surgery
- Non-operative
OVERALL FUNCTION IN EARLY STAGE NSCLCA WITHOUT BASELINE PULMONARY DYSFUNCTION

Diagnosis

Surgery  Chemotherapy  Radiation  Surveillance and Survivorship

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24+

Months

PROhab

Prehab
OVERALL FUNCTION IN EARLY STAGE NSCLCA WITH BASELINE PULMONARY DYSFUNCTION
PULMONARY REHABILITATION BEFORE SURGERY

- Decreases post-operative complications and hospital length of stay for patients undergoing lung resection.
- Increases preoperative oxygen consumption (VO2) and six minute walk distance facilitating rapid recovery.
- Lower incidence of atelectasis and hospital acquired infections when combined with physical therapy.
- Reduces morbidity and length of stay when used prior to pneumonectomy or lobectomy.

PULMONARY REHABILITATION AFTER SURGERY

Table 1  Pulmonary rehabilitation for lung cancer patients undergoing surgery.

<table>
<thead>
<tr>
<th>Study</th>
<th>Type of study</th>
<th>n</th>
<th>Start of PR</th>
<th>Duration of PR</th>
<th>Results</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spruit MA et al., 2006</td>
<td>Non-randomized pilot study</td>
<td>10</td>
<td>3 months post-op</td>
<td>8 weeks</td>
<td>Change in 6 MW of +145 m; +43.2% from initial change of 6 MW + 95.2 m</td>
<td>0.002</td>
</tr>
<tr>
<td>Cesario et al., 2007</td>
<td>Non-randomized pilot study</td>
<td>26</td>
<td></td>
<td>26 days</td>
<td></td>
<td>0.01</td>
</tr>
<tr>
<td>Stigt et al., 2013</td>
<td>Randomized prospective</td>
<td>57</td>
<td>1 month post-discharge</td>
<td>12 weeks</td>
<td>6 MW change of +35 m (study group) vs −59 m (control)</td>
<td>&lt;0.024</td>
</tr>
<tr>
<td>Arbane et al., 2011</td>
<td>Randomized prospective</td>
<td>53</td>
<td>1 day post-op</td>
<td>5 days</td>
<td>6 MW change</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Cesario et al., 2007</td>
<td>Pilot Study</td>
<td>8</td>
<td>Pre-operative</td>
<td>4 weeks</td>
<td>6 MW change of +79.0 m</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Bobbio et al., 2008</td>
<td>Prospective</td>
<td>12</td>
<td>Pre-operative</td>
<td>4 weeks</td>
<td>VO2/max (ml/kg/min) change from 13.5 to 16.3</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Bagan P et al., 2013</td>
<td>Prospective</td>
<td>20</td>
<td>Pre-operative</td>
<td>3 weeks</td>
<td>VO2/max Increase of 12%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Divisi et al., 2013</td>
<td>Prospective</td>
<td>27</td>
<td>Pre-operative</td>
<td>4 weeks</td>
<td>VO2(max) increase of 12.9 ± 1.8 a 19.2 ± 2.1 ml/kg/min PR had less hospital days</td>
<td>0.0001</td>
</tr>
<tr>
<td>Benzo et al., 2011</td>
<td>Randomized prospective</td>
<td>10</td>
<td>Pre-operative</td>
<td>4 weeks</td>
<td></td>
<td>0.058</td>
</tr>
</tbody>
</table>

*6 MW: six-minute walk; m: meters.
# Pulmonary Rehabilitation for Nonoperative Lung Cancer

## Table 2: Pulmonary rehabilitation for patients with locally advanced NSCLC.

<table>
<thead>
<tr>
<th>Study/year</th>
<th>Type of study</th>
<th>n</th>
<th>Type of cancer</th>
<th>Initiation of PR</th>
<th>Outcomes</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glatkki et al., 2012 (27)</td>
<td>Retrospective</td>
<td>47</td>
<td>NSCLC</td>
<td>After cancer treatment</td>
<td>Mean increase in 6 MW, 41 m</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Shannon et al., 2011 (28)</td>
<td>Prospective</td>
<td>189</td>
<td>NSCLC</td>
<td>After cancer treatment (n = 113)</td>
<td>Patients undergoing cancer treatment and PR had larger improvements of 6 MW (+92.5 m vs +64.3 m)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>During cancer treatment (n = 76)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pasaqua et al., 2012 (29)</td>
<td>Prospective</td>
<td>25</td>
<td>NSCLC</td>
<td>After cancer treatment</td>
<td>Mean change in six minute walk + 62.73 m</td>
<td>0.003</td>
</tr>
</tbody>
</table>

*6 MW: six-minute walk; m: meters.
Pain
COMMON CAUSES OF PAIN IN LUNG CANCER

- Metastases
  - Bone
  - Soft tissue
  - Visceral
- Chemotherapy-induced peripheral neuropathy
- Post-thoracotomy syndrome
- Degenerative disorders
  - Spinal stenosis
  - Osteoarthritis
MULTIMODAL TREATMENT OF PAIN

Non-pharmacologic
- Exercise/weight loss
- PT/OT/Lymphedema education

Pharmacologic
- Anti-inflammatories
- Nerve stabilizers
- Analgesics

Surgical
- Laminectomy
- Injections
- Nerve blocks
BALANCE & FALLS
FACTORS CONTRIBUTING TO GAIT DYSFUNCTION AND FALLS IN LUNG CANCER PATIENTS

Intrinsic Factors:
- Age
- Neuropathy
- CNS metastases
- Muscle weakness
- Sarcopenia
- Social isolation
- Reduced stamina
- Poor vision
- Vestibular dysfunction
- Pain
- Reduced cognition
- Medications
- Dehydration
- Orthostasis

Extrinsic Risk Factors:
- Inappropriate clothing or footwear
- Defective wheeled medical equipment or furniture
- Inadequate lighting
- Home furnishings/rugs
- Pets
- Children
- Stairs
NEUROTOXIC CHEMOTHERAPEUTICS

- **Taxanes**
  - Paclitaxel, Docetaxel, Abraxane
  - Incidence: 11-83%
- **Vinca Alkaloids**
  - Vinorelbine
  - Incidence: 30-47%
- **Platinum Analogues**
  - Cisplatin, Carboplatin
  - Incidence: 6-100%
- **Other**
  - Capecitabine, Ixabepilone
  - Incidence: 67%

REHABILITATION

- Treatment phase considerations
  - Active treatment
  - Recovery

- Rehabilitation interventions
  - Education
  - Exercise
  - Balance training
  - Gait training

EXERCISE & CIPN

- In PN of varying etiologies
  - ↑ function, muscle strength, balance, stance, functional reach, NCV
  - ↓ pain, fall risk
  - Reverse muscle loss
  - Potential neuro-protective effects

- In CIPN
  - ↓ Side effects
  - ↑ Balance
  - Improved gait
  - ↑ QOL, ↓ CIPN symptoms
  - ↑ Strength

CANCER REHABILITATION VALUE PROPOSITIONS

- Improved functional outcomes
- Reduced ER visits & hospitalizations
- Improved pain management
- Optimized quality of life
- More frequent return to work
- Lower cost of care
CASE PRESENTATION
MICHAEL STUBBLEFIELD
KESSLER INSTITUTE FOR REHABILITATION
A 39-year-old woman with metastatic NSCLCA diagnosed 11/2016 with metastasis to the liver and pons.

She was treated with radiation to the pons lesion with regression and Tarceva® (erlotinib) for 8 months which ultimately failed and she developed right lateral chest wall pain due to metastatic disease.

She was treated Alimta® (pemetrexed)/carboplatin/Avastin® (bevacizumab) from 10/2017-1/2018 and then maintenance pemetrexed until she was found to have progression of disease on CT 5/2018.

She was switched to Tagrisso® (osimertinib) with stable disease by imaging since.

The patient's major functional issues include severe fatigue, dyspnea and right lateral chest wall pain.
What are the anticipated functional impairments in this patient?
OVERALL FUNCTION IN METASTATIC NSCLCA

Diagnosis

XRT Brain

Tarceva® (Erlotinib)

DVT

POD

Alimta® (Pemetrexed)
carboplatin Avastin® (Bevacizumab)

POD

Alimta® (Pemetrexed)

POD

Tagrisso® (Osimertinib)

Fatigue & Dyspnea

Pain

Rehab Medicine Consult

Months

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24+
What are the interventions likely to maximize function and quality of life in this patient?

When in the course of treatment would you direct this patient to rehabilitation services?

How would you identify appropriate rehabilitation clinicians and services?

How would you monitor the safety and efficacy of rehabilitation interventions?

What are the anticipated benefits of comprehensive cancer rehabilitation?
THANK YOU!

You may email questions to:

mstubblefield@selectmedical.com
JOIN US FOR LUNG CANCER PATIENT SUPPORT ECHO SESSION 12

LUNG CANCER TREATMENT:
PREPARING FOR POST-TREATMENT SURVIVORSHIP
THURSDAY APRIL 25, 2019
9:00 AM

Presenters:

Emily Tonorezos, M.D.
Internist, Adult Long Term Follow Up Program
Memorial Sloan Kettering Cancer Center

Jamie Studts, Ph.D.
Professor, Department of Behavioral Science
University of Kentucky College of Medicine
Director, Behavioral and Community-Based Research Shared Resource
University of Kentucky Markey Cancer Center