Joint Session with ACOFP and Cancer Treatment Centers of America (CTCA): Cancer as a Chronic Illness

Kevin F. Tulipana, DO
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Please check where applicable and sign below. Provide additional pages as necessary.
Name of CME Activity: 2016 AOA/ACOFP Osteopathic Medical Conference & Exposition (OMED)

Dates and Location of CME Activity: September 17-20, 2016 – Anaheim Convention Center, Anaheim, California
Topic: Joint Session with Cancer Treatment Centers of America and ACOFP: Cancer Screening: Consensus & Controversies

Name of Speaker/Moderator: Ashish Sangal, MD

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B. I have, or an immediate family member has, a financial relationship or interest with a proprietary entity producing health care goods or services. Please check the relationship(s) that applies.

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- Speakers’ Bureaus*
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<table>
<thead>
<tr>
<th>Organization With Which Relationship Exists</th>
<th>Clinical Area Involved</th>
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*If you checked “Speakers’ Bureaus” in item B, please continue:
- Did you participate in company-provided speaker training related to your proposed topic? Yes: No:
- Did you travel to participate in this training? Yes: No:
- Did the company provide you with slides of the presentation in which you were trained as a speaker? Yes: No:
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Signature: ________________ Date: 8/20/2016

Ashish Sangal, MD

Please fax this form to 847-952-5116, or e-mail to joank@acofo.org as soon as possible.
Deadline: Wednesday, August 31, 2016
Cancer As A Chronic Illness

Kevin Tulipana, DO
Hospital Medicine
Cancer Treatment Centers of America

OMED 2016
Anaheim, California
September 20, 2016

Disclosures

• None
Objectives

• Recognize the prevalence of the most common malignancies
• Become familiar with survival rates
• Identify and define treatment goals
• Recognize common late term effects of treatment
• Become aware of the importance of a primary care team in the longitudinal management of cancer patients.

Overview

• First thoughts?
• What do you do?
• Who do you send to?
• Do you follow up or loss?
• Role of primary care provider in cancer management
• Cancer IS a chronic disease
Risk Mitigation and Prevention

• This is what you do...
  – Encourage healthy lifestyle
  – Manage chronic disease well
  – Encourage regular screening and educate

• Early Detection
  – Cervical, Breast, Colon, Lung, Prostate and Skin

Lifetime Risk of Developing Malignancy

• 78% Malignancy Diagnosed in those 55 and older
  – People are living longer and therefore we are seeing more.
**Lifetime Risk**

- The probability that an individual will develop or die from cancer over the course of their life
- In the US – Lifetime Risk
  - Men
    - 1 in 2
  - Women
    - 1 in 3

**Relative Risk of Developing Cancer**

- Measure of strength of relationship between a particular risk factor and cancer compared to those without the risk
  - Smoking – 25 Times more likely to develop cancer
    - Relative risk 25
  - 1st Degree Relative with Breast Cancer 2 times
    - Relative risk of 2
      - Current thinking related to familial cancers
        » Interplay of gene variations and lifestyle
### American Cancer Society

#### Estimated New Cases for the Four Major Cancers by Sex and Age Group, 2015

<table>
<thead>
<tr>
<th></th>
<th>All ages</th>
<th>Younger than 45</th>
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<tbody>
<tr>
<td>All sites, men</td>
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Note: Estimates should not be compared with those from previous years.

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Mortality

• 590,000 Americans died as a result of cancer in 2015
  – 2\textsuperscript{nd} only to heart disease
  – Accounted for 1 in 4 deaths

Good news

Survival is improving!
5 Year Survival Rates

- 5 year Survival rate for all cancers diagnosed
  - 2004 to 2010 – Overall 68%
  - 1975 to 1977 – Overall 49%
Invasive Breast Cancer

- Most common malignancy in women
- 230,000 new cases 2015
- However….  
  - Rate has actually decreased overall  
  - 2002-2003 – 7% decrease  
  - 2007 – 2011 relatively stable, however slight increase of 0.3% among black women
Invasive Breast Cancer

• 40,000 Deaths/year, but lung remains the number one cause of cancer deaths
• 61% of Breast Cancer is Diagnosed at local stage
  – 5 year survival of local breast cancer
    • 99%
  – 5 year survival of that which has spread to regional lymph or other sites
    • 24%

Invasive Breast Cancer

• Modifiable Risk Factors
  – Weight
  – Combined Hormone Use
  – Inactivity
  – Alcohol Consumption
  – Long Term Heavy Smoking Use
  – Nocturnal Shift Work (disruption of sleep patterns)
Colon & Rectal Cancer

• Approximately 93,000 Colon and 39,000 Rectal
• 3rd Most Common in Men and Women as well as the 3rd most common cause of death
• 2007-2011 Rate decreased by 4.3% for those 50 and over
  – Increased by 1.8%/year in those younger than 50
  – 10% of cases occur in those under 50

Colon & Rectal Cancer

• 5 year survival – 65%
• 10 year survival – 58%
• Local Stage Colon Cancer has 90% 5 year survival
  – Beyond local
    • 40%
Lung Cancer

- 220,000 New Cases in 2015
  - Rate has been declining since the mid 1980s
    - 3.0%/year in Men
    - 2.2%/year in Women
- Accounts for more deaths than any other cancer
  - 27% of all cancer deaths
    - Only 15% of lung cancer is diagnosed at early stage
      - Early Stage Carries a 54% 5 year survival

Oral Cavity & Pharynx Cancer

- 45,800 cases in 2015
  - 2 X more common in men than women
  - 2007 – 2011 rate increased by 1.3%/year in white men, but decreased by 3%/year in black men and 1.3% in women
  - Increase among whit men driven by HPV associated squamous cell carcinoma of the base of tongue and tonsil.
What’s the primary care provider (PCP) role in cancer diagnosis & management?

• Initial Diagnosis pattern.
  – Incidental findings, patient complaints, pick up on screening.
  – Ensure appropriate follow up with abnormal findings.
  – Don’t ignore lumps, bumps or hematochezia.

What’s the PCP role in cancer diagnosis & management?

• Patient Encounters
  – Typical Primary Care Provider
    • 3-4 patients / year newly diagnosed.
  – Referred out but...
    • Patients primarily followed by oncology alone are not as likely to get management of their chronic diseases
    • PCP more likely to recognize needs of family and patient
    • Learn common complications and effects of treatment.
What’s the PCP role in cancer diagnosis & management?

• “Primary care providers...play a critical role in the prevention, diagnosis, treatment, and follow-up care for cancer patients and survivors. Further, they provide coordination of care for patients and access to support services for family members and caregivers.”
  - The Cancer Care Workforce, ACS CAN Policy Team 2011

• In particular, PCPs play a role in the management of:
  – Co-morbidities
  – Symptoms and/or side effects
  – Long-term survivorship support

Common Comorbidity
Hypertension

• Hypertension has been reported to be the most common comorbidity encountered in patients with malignancy
  – 37% of patients, compared to 29% in the general population
  – More common in certain types of treatment such as angiogenesis inhibitors, alkylating agents, immuno-suppressants after stem-cell transplantation

• Poorly controlled hypertension can significantly influence cancer management, potentially leading to the discontinuation of certain therapies

• Goal is to minimize the risk of end-organ damage and to enable the continuation of needed cancer therapy

• Target of BP management should match the JNC 8 classification and guidelines
Common Comorbidity
Diabetes Mellitus

• Increase in cancer mortality related to endometrial, breast, and colorectal cancers in patients with preexisting diabetes compared with normoglycemic individuals
• Hyperglycemia during chemotherapy for hematologic and solid tumors is correlated with increased toxicity
• Glucocorticoids are routinely used in many cancer treatment protocols, which often leads to poor glucose control. Typically post prandial glucose is the most effected
• Tube feeding and total parenteral nutrition (TPN) are frequently used in oncology to supplement or replace a regular diet for patients who cannot sustain their usual intake of nutritional requirements
  — Can lead to hyperglycemia

Who is a survivor?

An individual diagnosed with cancer is a cancer survivor

Survivorship is from the moment of diagnosis and continues through the balance of life after treatment
Cancer Care Continuum

The “Incurable” Cancer Survivor

- Living Longer with their disease
  - Multiple treatments and courses of therapy
  - Management of side effects
  - Balancing quality with quantity of life
- Tougher Discussions
  - Intent of therapy
  - When to stop therapy
- Active management for End-of-Life issues
The “Cancer-Free” Survivor

Follow-up after treatment...
- Not always meeting patient needs – lack of attention to post treatment effects, etc.
- Inconsistent and poorly coordinated
- Not always evidence based

Why do we need Survivorship Programs?

A poll done by the Lance Armstrong Foundation of 1,020 patients showed the following:
- 49% of survivors identified unmet needs
- 54% experienced chronic pain
- 70% experienced depression
- 43% reported decrease in income
- 32% reported a lack of advancement, demotion or job loss

2009 Picker survey of over 2,000 survivors:
- 43% wanted more information & advice
- 75% did not have, or did not know if they had, a care plan
- 75% did not know who to contact for advice after office hrs.
Cancer Patient to Cancer Survivor

- The Institute of Medicine 2005 – *Cancer Patient to Cancer Survivor – Lost in Translation*
- Identifies four essential components of a survivorship model
  - Prevention
  - Surveillance
  - Intervention
  - Coordination of care
- Emphasis on survivorship care plans

Empowering Survivors to Live Well

- Management of comorbidities
- Surveillance and Screening for Primary and Secondary Malignancies
- Identify spiritual and psychosocial distress
- Include psychosocial and spiritual support as part of the treatment plan
View the Guidelines

- Breast at bit.ly/BrCaCare
- Colorectal at bit.ly/acscolorc
- Head and Neck at bit.ly/acsheadneck
- Prostate at bit.ly/ACSPrCa

General Concerns

- Common Fear among PCPs in treating cancer patients
  - Unfamiliarity of treatments commonly used
  - Concern regarding affecting current treatments
  - Potential interactions
  - Underlying concern from patients and oncologists regarding the recognition and management of long term effects (LE’s) in adult cancer survivors
Overview of Late Term Effects (LE)

- General Late Term Effects of Treatment
  - Malaise and Fatigue
  - Surgical Changes
  - Pain and associated constipation
  - Cognitive Impairment
  - Appetite Changes/Weight Loss
  - Anxiety/Depression/PTSD

Study of Perception

- Journal of Oncology Practice – Nekhlyudov, MD et al. Nov 2013
  - Survey of 1130 Oncologists and 1072 PCPs regarding breast and colon cancer survivorship care.
    - Separate surveys to the respective specialties to tailor the questions
    - Well designed study outlining five chemotherapy agents often used for breast and colon cancer
    - A table was provided with the chemotherapy name and potential long term effects
Study of Perception

• Self Reported Confidence in LE’s

<table>
<thead>
<tr>
<th>Cancer</th>
<th>PCPs</th>
<th>Oncs</th>
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</thead>
<tbody>
<tr>
<td>Breast</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not at all</td>
<td>15%</td>
<td>1%</td>
</tr>
<tr>
<td>Somewhat</td>
<td>61%</td>
<td>22%</td>
</tr>
<tr>
<td>Very</td>
<td>23%</td>
<td>77%</td>
</tr>
<tr>
<td>Colon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not at all</td>
<td>14%</td>
<td>1%</td>
</tr>
<tr>
<td>Somewhat</td>
<td>54%</td>
<td>22%</td>
</tr>
<tr>
<td>Very</td>
<td>31%</td>
<td>76%</td>
</tr>
</tbody>
</table>

Study of Perception

Physicians were asked to select the LE they either identified or had seen for each of the chemotherapy

– Five Chemotherapy Agents
  1. Doxorubicin (Adriamycin)
  2. Cyclophosphamide (Cytoxan)
  3. Paclitaxel (Taxol)
  4. Fluorouracil
  5. Oxaliplatin (Eloxatin)
Study of Perception

• Late Effects were the following
  1. Cardiac Dysfunction
  2. Premature Menopause
  3. Secondary Malignancies
  4. Pulmonary Fibrosis
  5. Peripheral Neuropathy
Study of Perception

• Main LE’s for the Chemotherapy Agents in Study
  – Doxorubicin (Adriamycin) = Cardiac Dysfunction
  – Paclitaxel (Taxol) = Peripheral Neuropathy
  – Oxaliplatin (Eloxatin) = Peripheral Neuropathy
  – Cyclophosphamide (Cytoxan) = Premature Menopause and Secondary Malignancy
  – Fluorouracil = No significant identified LE’s

Results from the Survey

• Cardiac Dysfunction correctly identified as LE of Doxorubicin (Adriamycin)
  – 55% of Primary Care Physicians
  – 95% of Oncologists
Results from the Survey

• Peripheral Neuropathy identified as LE for Paclitaxel (Taxol)
  – 27% Primary Care Physicians
  – 97% of Oncologists

Results from the Survey

• Peripheral Neuropathy Identified as LE of Oxaliplatin (Eloxatin)
  – 22% of Primary Care Physicians
  – 97% of Oncologists
Results from the Survey

• Premature Menopause as LE of Cyclophosphamide (Cytoxan)
  – 15% of Primary Care Physicians
  – 71% of Oncologist

Results from the Survey

• Secondary Malignancy as LE of Cyclophosphamide (Cytoxan)
  – 17% of Primary Care Physicians
  – 62% of Oncologist
Reasons for Lack of Identification among PCPs

- Generally PCPs have limited contact with chemotherapy
- Medical Education has not focused on LEs or Survivorship
- Cancer therapy and options for treatment are greatly expanding
- Limited number of survivors being seen by PCPs

Chemotherapy Induced Peripheral Neuropathy (CIPM)

- Common During Treatment
- Common Long Term Effect with:
  - Platinum Based Drugs Oxaliplatin and Cisplatin
  - Vinca Alkaloids,
  - Taxanes
  - Bortezomib
  - Thalidomide
CIPN Identification and Treatment

- CIPN Typically Dose Dependent and Cumulative
- CIPN – Distal, symmetric distribution
- Predominantly Sensory and therefore limited motor involvement
- Rarely involves autonomic nervous system

CIPN Neurologic Symptoms

- Parasthesia
- May be Painful
- Caused by Direct toxicity of agents
- Immune Response
- Metabolic Derangements
CIPN

- Will Generally Improve with cessation of chemotherapy
- Oxaliplatin and Cisplatin CIPN may worsen for several months before improving with incomplete recovery

CIPN

- Paclitaxel – approximately ½ will improve over 4-6 months, but up to 80% will have residual symptoms at two years
Treatment of CIPN

• Prevention
  – Many trials generally inconclusive and conflicting
  – No Established agents recommended for prevention
  – Dosing regimen changes and timing directed by Oncology only proven modifier

• Symptomatic Treatment
  – Only one agent showed benefit from symptoms of CIPN in a multi-institutional double-blind study
  – Improvement was only modest
  – End point was improvement of pain and improvement of non-painful neurologic symptoms
Treatment of CIPN

• Which drug has shown improvement in symptoms of CIPN?
  a. Nortriptyline
  b. Gabapentin
  c. Pregabalin
  d. Duloxetine
  e. Amitriptyline

• Only drug to show modest improvement in clinical study
  d. Duloxetine
Treatment of CIPN

• Other Treatment
  – Compounded topical agents
  – Topical Menthol
  – Cognitive behavior therapy
  – Physical therapy
  – Integrative therapies such as acupuncture

Late Effects Summary

• Increasingly seen by PCPs
• Unfamiliar but common in survivorship
• Make yourself aware of common LEs as discussed
Late Effects Summary

- Doxorubicin = Cardiac Dysfunction
- Paclitaxel = Peripheral Neuropathy
- Oxaliplatin = Peripheral Neuropathy
- Cyclophosphamide = Premature Menopause and Secondary Malignancy (bladder, myelodysplasia, acute leukemia, lymphoma, thyroid and sarcoma)

References

- Marion, DW. Prevention and Treatment of Chemotherapy-Induced Peripheral Neuropathy. In UpToDate, Post TW (Ed) UpToDate. 2016
- Marion, DW. Overview of Neurologic Complications of Platinum-Based Chemotherapy. In UpToDate, Post TW (Ed) UpToDate. 2016
- Marion, DW. Overview of Neurologic Complications of Non-Platinum-Based Chemotherapy. In UpToDate, Post TW (Ed) UpToDate. 2016
- Marion, DW. Cardiotoxicity of Anthracycline-Like Chemotherapy Agents. In UpToDate, Post TW (Ed) UpToDate. 2015
References

- American Family Physician. Primary Care of the Patient with Cancer. AFP Vol 75, Number 8; 2007. George Smith, MD and Timothy Toonen, MD
- American Cancer Society Prostate Cancer Survivorship Care Guidelines, CA Cancer J Clin 2014; 64:225-249
- American Cancer Society Colorectal Cancer Survivorship Care Guidelines, CA Cancer J Clin 2015;65:427-455

Questions?
Advancements in Cancer Managements for Primary Care

COMING SOON!
Philadelphia
Tulsa
Chicago
Phoenix
Atlanta
Dallas/Fort Worth
Detroit
Grand Rapids