A Model of Shared-Care of the Cancer Survivor

Mary S. McCabe
Survivorship Care: An International Endeavor
Cancer Survivors
Risks of Health Outcomes

Long Term and Late Effects

- Genetic Factors
- Comorbidities
- Lifestyle Behaviors
- Exposures
  - Surgery
  - Chemotherapy
  - Radiation
Cancer and its Treatment
Domains of Concern

• **Physical/medical**
  – Organ toxicity and second cancers

• **Psychological**
  – Fear of recurrence, anxiety and depression

• **Social**
  – Changes in relationships, economic and education issues

• **Existential and spiritual**
  – Loss or deepened meaning in life

• **Informational**
  – Need for ongoing, comprehensive information
## Models of Care

<table>
<thead>
<tr>
<th>Author</th>
<th>Comparison</th>
<th>Population</th>
<th>QOL</th>
<th>PT Satisfaction</th>
<th>Psych Function</th>
<th>Recurrence Complications</th>
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<td>Kimman 2010</td>
<td>Nurse Oncologist</td>
<td>Breast</td>
<td>No report</td>
<td>No difference</td>
<td>No report</td>
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<td>No report</td>
<td>No report</td>
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<td>Colon</td>
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<td>Koinberg 2004</td>
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<td>No difference</td>
<td>No difference (HADS)</td>
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<td>Moore 2002</td>
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<td>Lung</td>
<td>No difference</td>
<td>Higher for nurses</td>
<td>↑ nurses</td>
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<td>Brown 2002</td>
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<td>Guillford 1997</td>
<td>More/Less Follow-up</td>
<td>Breast</td>
<td>No report</td>
<td>Preferred less follow-up</td>
<td>No report</td>
<td>No ↑ Services/cost</td>
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<td>Breast</td>
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<td>Expected Role of Physicians</td>
<td>Survivors (%)</td>
<td>Oncologists (%)</td>
<td>PCPs (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------------</td>
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<td>----------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cancer recurrence</td>
<td>Full 61% /7%</td>
<td>Full 53%</td>
<td>Full 10%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A lot 30% /26%</td>
<td>A lot 45%</td>
<td>A lot 58%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screening for other cancers</td>
<td>Full 32% /34%</td>
<td>Full 2%</td>
<td>Full 58%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A lot 33% /47%</td>
<td>A lot 23%</td>
<td>A lot 38%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General preventive health care</td>
<td>Full 6% /65%</td>
<td>Full 0%</td>
<td>Full 79%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A lot 10% /28%</td>
<td>A lot 5%</td>
<td>A lot 18%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment of other medical problems</td>
<td>Full 2% /68%</td>
<td>Full 0</td>
<td>Full 83%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A lot 6% /26%</td>
<td>A lot 1%</td>
<td>A lot 14%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Some 23% /5%</td>
<td>Some 15%</td>
<td>Some 1%</td>
<td></td>
<td></td>
<td></td>
</tr>
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</table>

Stakeholder Perspectives

• **Survey of Physician Attitudes Regarding the Care of Cancer Survivors**
  – Nation-wide survey
  – 3,600 oncologists and PCPs

• **Oncologists**
  – PCPs lack the necessary skills (75%)
    • Oncologist – led care (57%)
    • Shared – care (16%)
    • PCP – led care (2%)

• **PCPs**
  – Have the necessary skills (59%)
    • Oncologist – led care (25%)
    • Shared – care (38%)
    • PCP – led care (10%)
Who Provides Follow-up Care Primary Care or Oncology Team?

- PCPs aren’t prepared
- Oncologists don’t communicate
- Patients are uncertain about the roles and responsibilities of each group

Grunfeld, JCO; 2006, 2011
Cheung, JCO; 2009, 2010
Del Giudice, JCO; 2009
Nekhlyudov, JCO; 2009
Potosky, J Gen Int Med, 2011
MSK Model of Care
Survivors of Adult-Onset Cancers

• Independent Nurse Practitioner visit
• **Focus of visit**
  – Surveillance for recurrence of the primary cancer
  – Evaluation and treatment of medical and psychosocial consequences of treatment
  – Screening for second cancers
  – Education about survivorship issues and availability of community resources
  – Health promotion, including smoking cessation, diet and exercise
  – Review of treatment summary and care plan
  – Communication with community physician
Follow Up Care of Cancer Survivors

- Diagnosis
- Treatment
- Early Follow Up (FU)
- Survivorship Post-Tx FU
- Long Term Post-Tx FU

- CA Recurrence
- Screening other cancers
- Sequelae of treatment

Component Care
- Oncologist
- MSK Nurse Practitioner
- Community Physician
SUMMARY OF CANCER TREATMENT
Date of preparation: 7/8/2009

Name: Jane Doe Date of Birth: 1/1/1987

Cancer Diagnoses:
1. Hodgkin Lymphoma, Stage IIIB (nodular sclerosing)
2. Myelodysplasia/treatment-related AML

Treatment center: Memorial Sloan-Kettering Cancer Center
Date of diagnosis: 7/2001; age at diagnosis: 14 ½ years old
Date of diagnosis of MDS: 12/2002
Date of diagnosis of AML: 6/2003
Date of completion of therapy: 8/21/03

Radiation Therapy

<table>
<thead>
<tr>
<th>Start</th>
<th>Stop</th>
<th>Field</th>
<th>Dose (cGy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/18/02</td>
<td>3/5/02</td>
<td>Modified mantle (bilateral neck; mediastium; right axilla)</td>
<td>2100</td>
</tr>
<tr>
<td>3/6/02</td>
<td>3/21/02</td>
<td>Para-aortic nodes</td>
<td>2100</td>
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</table>

Chemotherapy: (Hodgkin: BEACOPP 8/2001-1/2002) (BMT protocol 01-055)

<table>
<thead>
<tr>
<th>Drug Name</th>
<th>Dose (units or mg/m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doxorubicin</td>
<td>272 mg/m²</td>
</tr>
<tr>
<td>Bleomycin</td>
<td>78 IU/m²</td>
</tr>
<tr>
<td>Cyclophosphamide</td>
<td>14 grams</td>
</tr>
<tr>
<td>Prednisone</td>
<td></td>
</tr>
<tr>
<td>Procarbazine</td>
<td></td>
</tr>
<tr>
<td>Vincristine</td>
<td></td>
</tr>
<tr>
<td>Etoposide</td>
<td>2400 mg/m²</td>
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MDS
Cytarabine
L-Asparaginase

Mismatched unrelated allogeneic T-cell depleted peripheral stem cell transplant: 8/21/2003
Cyto reduction: Busulfan, Melphalan, Fludarabine.

Potential Late Effects

| Screening Recommendations
<table>
<thead>
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<tbody>
<tr>
<td>• Annual labs to include: CBC, comp profile, TSH, urinalysis, lipid profile, insulin, CRP, Vit D 25-OH.</td>
</tr>
<tr>
<td>• Echocardiogram/EKG every 1-2 years</td>
</tr>
<tr>
<td>• Pulmonary Function Test every 1-3 years</td>
</tr>
<tr>
<td>• Bone density study (DXA) baseline and as clinically indicated</td>
</tr>
<tr>
<td>• Breast MRI and mammogram yearly starting at age 25</td>
</tr>
<tr>
<td>• Colonoscopy every 5 yrs starting at age 35</td>
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</table>

- Heart problems
- Lung problems
- Osteoporosis
- Thyroid problems
- Fertility problems
- Bladder problems
- Dental problems
- Secondary malignancies
NP-led Survivorship Clinics
Physician Participation

<table>
<thead>
<tr>
<th></th>
<th>Percent</th>
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<tbody>
<tr>
<td>Physician Participation (78)</td>
<td>85-100%</td>
</tr>
<tr>
<td>Patient Referral</td>
<td>40-75%</td>
</tr>
<tr>
<td>Patient Acceptance</td>
<td>95-98%</td>
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</table>
Risk-Stratified Shared Care Model for Cancer Survivors

**Low Risk:**
All of the following:
- Surgery only or chemotherapy that did not include alkylating agent, anthracycline, bleomycin, or epipodophyllotoxin
- No radiation
- Low risk of recurrence
- Mild or no persistent toxicity of therapy

**Moderate Risk:**
Any of the following:
- Low or moderate dose alkylating agent, anthracycline, bleomycin, or epipodophyllotoxin
- Low to moderate dose radiation
- Autologous stem cell transplant
- Moderate risk of recurrence
- Moderate persistent toxicity of therapy

**High Risk:**
Any of the following:
- High dose alkylating agent, anthracycline, bleomycin, or epipodophyllotoxin
- High dose radiation
- Allogeneic stem cell transplant
- High risk of recurrence
- Multi-organ persistent toxicity of therapy

**Communication Points with Primary Care Physician**

a. Cancer diagnosis and planned therapeutic approach, brief overview of chemotherapy, radiation therapy and/or surgery.

b. Survivorship Care Plan: cancer diagnosis, cancer therapy, surveillance recommendations, contact information.

c. Periodic update with changes in surveillance recommendations, and new information regarding potential late effects.

d. Periodic update of survivor’s health for primary care physician’s record.

**Abbreviations:**
- CA=diagnosis; Off Rx=completion of cancer therapy; PCP=primary care physician; LTFU=long-term follow-up (survivor) program; Onc=oncologist
- Primary responsibility for cancer-related care; PCP continues to manage noncancer comorbidities and routine preventive health maintenance.
- Cancer Center or Oncologist/oncology group practice; if there is no LTFU/Survivor Program available, care in the box is provided by the primary oncologist.
Care of Breast Cancer Patients

Diagnosis

- Community Physician
- MSKCC Breast Cancer Specialist (surgery, chemotherapy, radiation)

Treatment

- MSKCC Breast Cancer Specialist (surgery, chemotherapy, radiation)

Early Follow up

- MSKCC Survivorship Nurse Practitioner

Survivorship Post Treatment Follow-up

- Nurse Practitioner provides transition note to Internist:
  - 10 yrs post treatment for t1,2 NO;
  - 5 yrs for t1,2 NO triple-negative;
  - 5 yrs for DCIS

Long term Post Treatment Follow-up

- Community Physician

2-5 yrs post treatment. The patient is provided a standardized care plan.
## Criteria for Transitioning Breast Patients to Primary Care Provider

<table>
<thead>
<tr>
<th>Service</th>
<th>Cancer Type</th>
<th>Criteria</th>
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<tbody>
<tr>
<td>Breast DMT Surgery, Radiation &amp; Medicine</td>
<td>Breast</td>
<td>10 years post treatment for t1, 2 NO;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 years for t1, 2 NO triple-negative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 years for DCIS</td>
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## Transition Summary of Breast Cancer Survivors

<table>
<thead>
<tr>
<th></th>
<th>2010 (Sept-Dec)</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014 (Jan-June)</th>
<th>TOTAL</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Eligible for transition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>252</td>
<td>875</td>
<td>1116</td>
<td>1074</td>
<td>508</td>
<td>3825</td>
<td></td>
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<tr>
<td>Offered transition</td>
<td>198</td>
<td>72%</td>
<td>804</td>
<td>72%</td>
<td>768</td>
<td>47%</td>
<td>328</td>
</tr>
<tr>
<td>Transitioned to PCP</td>
<td>96</td>
<td>47%</td>
<td>396</td>
<td>49%</td>
<td>369</td>
<td>48%</td>
<td>149</td>
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</tbody>
</table>
Return to MSK

• Review of all transitioned patients seen between September 2010 and 2012
  – 11 women returned to MSK
    • 6 see by MD for recurrence
    • 1 referred to Gynecology for new malignancy
    • 4 had symptoms managed by the Survivorship NP
Reasons for Decline/Refusal

• Distrust of PCP to detect recurrence
• Other providers at the institution
• Finds annual visit reassuring
• Comprehensive visit with a focus on health promotion
• 50% of individuals who decline state that they will reconsider
Next Steps for Transitions

• Move from following all survivors ‘for life’ to a risk-based approach of survivorship follow-up care
• Necessary components
  – Commitment of institutional leaders
  – Development and review of transition criteria
    • Timing and method of transition
  – Early and consistent communication of the plan for follow-up care by treating physicians
  – Development and evaluation of a process for rapid return of patients with a cancer-related problem
• Increase number of eligible individuals transitioning to PCP