

Multidisciplinary Clinical and Research Programs in Cancer Survivorship: Practical Issues

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Living Well after Cancer Program
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Cancer Survivorship: A Public Health Issue

- Estimated 9.8 million cancer survivors in U.S. in 2001
- 14% of cancer survivors diagnosed \geq 20 years ago
- Adults:
 - 5-year survival 64%
 - >60% of cancer survivors are 65 years and older
- Children:
 - 5-year survival 75%, 10-year survival 70%
 - 25% of deaths in childhood cancer survivors are due to late effects of treatment

- *NCI Office of Cancer Survivorship Fact Sheet*
(http://dccps.nci.nih.gov/ocs/ocs_factsheet.pdf)



Cancer Survivorship: Improving Treatment Outcomes and Quality of Life

- What are the most common late effects of treatment?
- Who is at risk and can they be protected?
- Can treatment-related injury to normal tissue be prevented or reversed?
- What proportion of survivors will experience recurrent or second malignancies?

NCI Plans and Priorities for Cancer Research (FY04)



Cancer Survivorship: Improving Treatment Outcomes and Quality of Life

- Who should be following these survivors to detect disease recurrence?
- What constitutes “optimal surveillance” and what is the cost of such follow-up care?
- Do medical, psychosocial, or behavioral interventions reduce morbidity in these populations?

*NCI Plans and Priorities for Cancer Research
(FY04)*



Living Well After Cancer Program, Abramson Cancer Center

- APN coordinated
 - PhD prepared nurse practitioner
- Created in 2001
- Initial funding by Lance Armstrong Foundation
- Program bridges Children's Hospital of Philadelphia (CHOP) and Abramson Cancer Center (Penn)



Living Well After Cancer Program

- Specialized center for clinical care, research, and education for adult cancer survivors
- Full-time nurse practitioner/coordinator
- Dedicated cardiologist
- Participating oncologists
- On-site nutritionist, psychosocial counselors, physical therapists
- Initial patient focus:
 - Breast cancer
 - Testicular cancer
 - Young survivors



Program Goals

- Build upon established surveillance guidelines
 - no existing tools or guidelines for care of adult cancer survivors
- Establish a standard evaluation approach
 - identify issues
 - create individualized risk profiles
- Develop research program
- Disseminate findings to providers and patients
- Advise developing programs nationally
 - CINJ/RWJ, Dana Farber, MDACC, MSKCC



Challenges

- Diverse populations
- Multiple care providers
- Large patient volumes
- Reimbursement, Insurance issues
- HIPPA
- Funding



Survivorship Care Models

Practice Model

- Clinical program
- Provide direct care to survivors
- Forum for clinical research

Testicular cancer, adult survivors of childhood cancer

Consultative Model

- Research program
- Recommendations to survivors/providers
- Major focus is research & education

Breast cancer



Practice Model

- Initially piloted in breast cancer survivors
- Ongoing in:
 - Testicular cancer survivors
 - Young adult cancer survivors



Goals for Clinical Care

- Focus beyond monitoring for recurrence
- Assess changes in an individual's physical & personal well-being
- Evaluate potential long-term effects of prior treatments
- Assess risk of subsequent malignancy & appropriate screening
- Enhance overall QoL & well-being



Develop Individual Risk Profile

- Clinical Assessment
 - Cancer diagnosis & treatment
 - Complications during treatment
 - Post-treatment complications
 - Family history
 - Current problems & medications
 - Physical examination findings
 - Labs and scans to date
 - Health maintenance/screening behaviors
 - modifiable risk factors



Assess Modifiable Risk Factors

- Primary prevention
 - diet
 - exercise
 - tobacco use
 - alcohol
 - rest
 - sunscreen use/safety
 - environmental/industrial exposures
 - sexual practices
 - hormone exposure
 - health maintenance



Assess Modifiable Risk Factors

- Secondary prevention
 - Breast Self Examination (BSE)
 - mammography
 - skin examination
 - DRE
 - colonoscopy
 - DEXA scan (Bone Mineral Density)
 - other screening tests



Clinical Management

- Recommendations
 - APN consultation
 - Cancer follow-up
 - Health maintenance
 - modifiable risk factors
 - Studies
 - Scans
 - Labs
- Referrals
 - PCPs
 - sub-specialists
 - rehabilitation
 - nutritional assessment
 - psychosocial counseling



Breast Cancer Program Prospective Outcomes of Survivors of Solid Tumors (POST)

- IRB-approved protocol for all participants
- Consent, HIPPA authorization
- Stage 0-III breast cancer eligible
- Links to tumor-specific registries, tissue resources
- Methods
 - Annually beginning 1 year post-diagnosis
 - Core Questionnaire (Disease status, treatment, demographics, comorbidities, family history)
 - Symptoms (Memorial Symptom Assessment)
 - Physical Activity (IPAQ)
 - QOL (City of Hope, FACT, others)
 - Comparison to population data (NHIS)



Consultative Model: Breast Cancer

Patients identified through RBCDB
Physician consent to contact
Intro letter/packet

Research staff meets patient at scheduled clinic visit or
introduces POST protocol by phone

POST

Research
Studies

Feedback to
Oncologist/
APN team



Research Program

- Driven by clinical evidence
- Specific Aims
 - decrease the physiological & psychosocial morbidity associated with cancer treatment
 - describe the quality of life of cancer survivors in the immediate post-treatment period and over time.
 - describe the physical activity (PA) of breast cancer survivors over time and relate PA to physiologic, psychosocial, and QoL outcomes in this population.
 - develop interventions that will improve the QoL for all cancer survivors



Multidisciplinary Research Team

Medical Oncology

- Anna Meadows, M.D.
- Angela DeMichele, MD, MSCE
- Linda Jacobs, Ph.D.
- Carrie Stricker, MSN, CRNP
- David Vaughn, MD

Biostatistics/Epi

- Andrea Troxel, Ph.D.

Genetics/Genomics

- Kate Nathanson, M.D.
- Richard Aplenc, M.D.
- Peter Kanetsky, Ph.D.

Behavioral Science

- Steven Palmer, Ph.D.
- James Coyne, Ph.D.

Serum Markers, Proteomics

- Ian Blair, Ph.D.

Urology

- S. Bruce Malkowicz, M.D.
- Alan Wein, M.D.

Cardiology

- Joseph Carver, M.D.
- Emile Mohler, M.D.

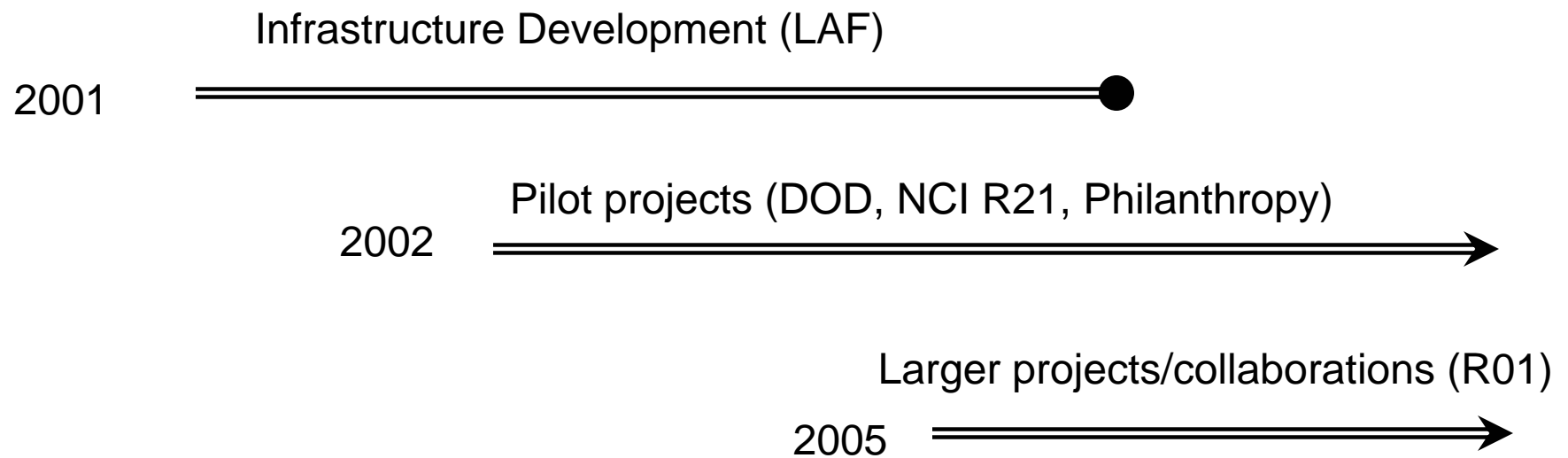


Ongoing Research: Breast Cancer

- Risk and predictors of major depressive disorder (Coyne/Palmer)
- Genetic determinants of premature menopause and bone loss (DeMichele)
- Hot flashes and QOL (Jacobs)
- RCT acupuncture for hot flashes (Mao)
- Sleep intervention study (Cruess)
- Patterns and determinants of physical activity in older & younger breast cancer survivors



Timeline



Conclusions

- Optimal follow-up for cancer survivors not yet defined
 - Provider and venue
 - Screening and surveillance
- Rise in adult survivors of cancer necessitates
 - Specific clinical care needs
 - Research on late effects, second cancers and QOL
- Patients are receptive; providers sometimes are not



Conclusions

- Research and clinical care require integrated, multidisciplinary approach
- APN role with research focus (PhD?) is ideal
- Different cancers require different approaches
 - Practice model vs. consultative model
- Adequate infrastructure, funding a necessity to sustain
- Opportunity for network of centers to collaboratively approach survivorship

