The Nurse Navigators role in Early Stage Breast Cancer, and Development of Tailored Radiation Treatment Plan

Laura Ochoa, RN, ANP-BC, Ph.D.

Radiation Oncology

Barnes Jewish Hospital at Washington University

History of Nurse Navigator

- 1970's
  - Utilization Review
  - Worked for Medicare, Medicaid or private insurance
  - Adversarial relationship
- 1980's
  - Utilization Management
  - Hospital Based
  - Restriction of patients
  - Viewed by medical staff poorly
- 1990's
  - Case Management
  - Part of multidisciplinary team
  - Served as clinician and patient advocate
History of Nurse Navigator - 2

- Dr. Harold Freeman – Harlem Hospital
- Coined the phrase “patient navigation”
- Goal: Address disparities in healthcare
- Priority Focus:
  - Breast cancer
  - Target African-American women
- Patient navigators: Lay community case workers

History of Nurse Navigator - 3

- 2005
- Cancer Patient Navigation Act
- Funding: 25 million dollars
- Awarded over 5 years
- Patient Navigator Programs Helped
  - Improve communication
  - Decrease barriers to care
  - Provide educational support
  - Offer linguistically competent assistance

NCI Designated Cancer Centers

- Siteman Cancer Center
- Must have Navigation program
- In 2015 – Navigation program must be functioning well
First Cohort for Navigation – Breast Cancer

- Funded By
  - Avon Foundation
  - American Cancer Society
  - National Breast Cancer Foundation
  - Komen for the Cure

- Positions filled by
  - Nurses 75%
  - Social Workers
  - Lay persons - community outreach

Fragmentation of Care
- Breast imaging
- Surgeon
- Chemotherapy
- XRT

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Common Barriers to Care Addressed by Navigators

- Scheduling
  - Difficulty scheduling
  - Long wait times
  - Financial and economic
  - Differences in Language
  - Cultural and ethnic diversity
  - Communication
    - Among oncology team
    - With other providers
    - With family
  - Transportation
  - Emotional concerns

Financial issue

- Increasing co-pay and deductible
- New systemic treatments
  - Some >$50,000 for single dose
  - 20% co-pay
- Should the cost be part of the discussion
- New radiation treatments with increasing cost
- Missed time from work
- Child care issues
Breast Cancer Survivorship Care

- Definition: American Cancer Society: survivor from diagnosis
- Steady increase in the number of women diagnosed each year.
- Baby boomers
- More young women diagnosed
  - Living longer with the disease

Survivorship Care Plans

- Two components
  - Treatment summary
  - Survivorship care plan
- Completed by
  - NP
  - Nurse Navigator
- Survivorship care plan
  - Surveillance screening to be done
    - When
    - Whom
    - Where
- Transition of care

Early Stage Breast Cancer
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Radiation Techniques for Early Stage Breast Cancer

- Whole breast radiation
- Hypofractioned whole breast radiation
- Accelerated partial breast radiation
  - ExTERNAL beam
  - HDR brachytherapy
  - Multi-catheter
  - MammoSite
  - SAVI
- Phase III randomized trial – Europe
  - Median follow up 10.2 years
  - No difference in local recurrence, disease free survival or OS
  - Excellent/Good cosmetic outcome PBI (81%); WB (63%)
- NSABP B-39 - pending
Whole Breast Radiation
- Treatment Planning
  - One week
- Treatment Delivered
  - 5.5 to 6.5 weeks
- Toxicity
  - Acute
    - Skin reaction
    - Fatigue
    - Loss of work time
  - Late
    - Chronic skin changes
    - Pneumonitis
    - Rib fracture
    - Pericarditis

Hypofractionated Whole Breast Radiation
- Treatment Planning
  - One week
- Treatment Delivered
  - 3 weeks and 1 day (16 fractions)
- Toxicity
  - Acute
    - Skin reaction - mild
    - Fatigue
    - Loss of work time
  - Late
    - Chronic skin changes
    - Pneumonitis
    - Rib fracture
    - Pericarditis

Eligibility for Accelerated Partial Breast Radiation Therapy
- 3 Consensus Statements
  - American Society of Breast Surgeons (ASBS)
  - American Brachytherapy Society (ABS)
  - American Society of Radiation Oncology (ASTRO)
- Criteria
  - Oncologic Factors
    - Breast conserving surgery
    - <3 cm disease
    - Invasive ductal carcinoma or ductal carcinoma in situ
    - Negative margins (2mm)
    - No lymphovascular space invasion
    - No lymph node involvement
    - No neoadjuvant chemotherapy
Consensus Guidelines for APBI

American Society Breast Surgeons

- Age >45 years for invasive cancer and Age >50 DCIS
- Negative microscopic surgical margins
- Total tumor size (IDC and DCIS) <3cm
- Sentinel lymph node negative

American Brachytherapy Society

- Age >50 years
- Tumor size <3cm
- Histology, IDC, DCIS
- Negative surgical margins
- No lymphovascular space invasion
- Sentinel lymph node negative

ASTRO

- Age >60 years
- Tumor size <2 cm
- Margins negative by at least 2 mm
- ER positive
- IDC ONLY - DCIS not allowed
- No lymphovascular space invasion
- Sentinel lymph node negative
- Neoadjuvant therapy NOT allowed

Eligibility for Accelerated Partial Breast Radiation Therapy

- Criteria (cont)
  - Patient factors
    - Age >40 years
    - No active connective tissue disorder
    - Well enough to tolerate outpatient procedure
  - Cavity factors
    - Must be of appropriate size – or visible
    - Is less than 1/3 of the total volume of breast tissue
    - 2.5-3 cm deep post-op is optimal up to 6 weeks possible
  - If the pt requires adjuvant chemotherapy APBI is delivered 1st
    - Chemotherapy should not be given for 4 weeks after APBI
Partial Breast Radiation

- External Beam
- Indwelling catheters
  - Multicatheter
  - Mamosite
  - SAVI

Accelerated Partial Breast Radiation – External Beam

- Treatment Planning
  - One week
- Treatment Delivered
  - Twice (10 fractions, BID over 5 days)
  - Set up uncertainty
  - Larger margin of breast tissue targeted
- Toxicity
  - Acute
    - Skin reaction - minor
    - Fatigue - minor
    - Loss of work time (5 days)
  - Late
    - Chronic skin changes
    - Pneumonitis
    - Rib fracture

Accelerated Partial Breast – MRI Guided
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**Accelerated Partial Breast Radiation – HDR**

- Treatment Planning
  - One to Two days

- Treatment Delivered
  - 1 week (10 fractions, BID over 5 days)

- Toxicity
  - Acute
    - Skin reaction
    - Surgical site infection (4-11%)
    - Fatigue
    - Loss of work time (5 days)
  - Late
    - Chronic skin changes - fibrosis
    - Rib fracture
    - Fat necrosis (1-12%)

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**SAVI**

- SAVI uses multiple catheters to target radiation where it is needed most, which:
  - Allows treatment to be completed in 5 working days
  - Minimizes radiation exposure to healthy tissue and organs

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**MammoSite Breast Brachytherapy Registry Trial**

- 1449 women
- Median follow up 63.1 months
- 5 year rate of IBTR was 3.8%
- Excellent/Good cosmetic result achieved 91% of pts @ 60 months