They Said It Couldn’t Be Done!

Cancer Clinical Trial Success in Coastal Carolina ?!

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ASTRO 2010
Cancer Clinical Trial Success in Coastal Carolina: Overview

- Cancer Clinical Trials & Obstacles to Enrollment
- Cancer Disparities Research Partnership (CDRP)
- CDRP in Coastal Carolina – Lessons Learned & Keys to Success
- Conclusions
Obstacles to Cancer Clinical Trial Enrollment

- Patients
- Doctors
- Other
People’s Attitudes About Cancer Clinical Trials

• 81% said “somewhat or very important” overall

• 82% said “somewhat or very willing” to participate for initial treatment

• 87% said “somewhat or very willing” to participate if initial treatment failed
  • Comis et al., Public Attitudes Toward Participation in Cancer Clinical Trials, J Clin Oncol 2003;21: 830-835
Physician Excuses for Not Offering Clinical Trials

1. Doctor-Patient Relationship (73%)
2. Informed Consent (38%)
3. Uncomfortable w/ Uncertainty (22%)
4. Perceived Conflict: Scientist vs. Clinician (18%)
5. Difficulties w/ Following Procedures (9%)

Physician Excuses for Not Offering Cancer Clinical Trials

- Time
- Money
- Hassles

"If you ask the oncologists if they believe in clinical trials...they all say yes....there’s a dichotomy between what the oncologists honestly believe and how that fits into their practice."

(Walk the walk!)

- Robert L. Comis, M.D., president of the Coalition of National Cancer Cooperative Groups

Other Obstacles to Trial Enrollment

- Protocol Not Available for Disease/Stage
  - Patient Poor Performance Status

- Bureaucratic Hurdles
  - More Time, Money, Hassles
  - Lawyers?
Typical Case of Dwindling Numbers from UC Davis?

171 of 276 patients (62%) considered for protocol by MD

91 of 171 (53%) had protocol available for disease and stage

76 of 91 (84%) met eligibility

39 of 76 (51%) agreed to enroll & participate

TOTAL ENROLLMENT RATE: 39 of 276 (14%)

Lara et al., Prospective Evaluation of Cancer Clinical Trial Accrual Patterns: Identifying Potential Barriers to Enrollment, J Clin Oncol 2001;19:1728-1733
Adult Enrollment onto Cancer Clinical Trials is Poor

Enrollment from Underserved Populations is Worse!
Who Are We Failing Most?

- African Americans
- Hispanics/ Latinos
- American Indians & Alaskan Natives
- Asian Americans & Pacific Islanders
- The Elderly
- Poor Whites
What are Cancer Health Disparities?

“Differences in the incidence, prevalence, mortality, and burden of cancer … that exist among specific population groups.”

U.S. National Institutes of Health
www.cancer.gov
Racial Disparities in Cancer Death Rates in the U.S.

- Death rates for cancer are highest among blacks.\(^1\)

- Black women diagnosed with breast cancer have a 5-year survival of 71% vs. 86% for white women.\(^2\)

- The death rate from prostate cancer is ~2.4 times higher in black men than in white men.\(^3\)

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The Cancer Disparities Research Partnership (CDRP) Solution - National Cancer Institute (NCI)

- Pilot program for community-based institutions new to NCI clinical research
- Focus on disparity populations utilizing RT-based protocols
- Dedicated PI at community-based hospital choosing mentor(s) at academic institution
- Mentoring/education facilitated through TELESYNERGY®
CDRP’s “Parents” at the NCI

- N. Coleman, MD
- R. Wong, PhD
- F. Govern, PhD
- B. Vikram, MD

THANK YOU!!
Current CDRP Sites in the U.S.

- New Hanover Regional in NC (PI - Maguire)
- Rapid City Regional in SD (PI - Petereit)
- Singing River in MS (PI - Clarkson)
- UPMC McKeesport in PA (PI - Heron)
- 21st Century Oncology of CA (PI - Khan)
Underserved Populations in Coastal Carolina

- African Americans
- Elderly
- Poor Whites
Racial Disparities in Cancer Death Rates (per 100k population) in NC

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>African Americans</th>
<th>Whites</th>
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<tbody>
<tr>
<td>Breast</td>
<td>34</td>
<td>23</td>
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<tr>
<td>Colorectal</td>
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<td>17</td>
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<tr>
<td>Lung</td>
<td>56</td>
<td>59</td>
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<tr>
<td>Prostate</td>
<td>76</td>
<td>26</td>
</tr>
</tbody>
</table>
“Improving Cancer Outcomes for Underserved Patients in Southeastern North Carolina”
New Hanover Clinical Trial Enrollment

Total Subjects in RT studies by year

- 2003
- 2004
- 2005
- 2006
- 2007
- 2008
- 2009
Lessons Learned
Lessons Learned

- Referring MD “Buy-In”
  - Office visits
  - Tumor board presentations
- Personnel Turnover
- Trial Selection
  - Need more than interesting science
Good Decisions: Keys to Success
Keys to Success

- Focus on key disease site: prostate cancer
- Focus on few high-volume trials
- Community PI initiated trials
- Hiring dedicated RN(s) for clinical research
- Practice expansion & new MD hires
CLINICAL INVESTIGATION

PHASE II TRIAL OF HYPERFRACTIONATED INTENSITY-MODULATED RADIATION THERAPY AND CONCURRENT WEEKLY CISPLATIN FOR STAGE III AND IIVA HEAD-AND-NECK CANCER

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Purpose: To investigate a novel chemoradiation regimen designed to maximize locoregional control (LRC) and minimize toxicity for patients with advanced head-and-neck squamous cell carcinoma (HNSCC).

Methods and Materials: Patients received hyperfractionated intensity modulated radiation therapy (HIMRT) in 1.25-Gy fractions b.i.d. to 70 Gy to high-risk planning target volume (PTV). Intermediate and low-risk PTVs received 60 Gy and 50 Gy, at 1.07, and 0.89 Gy per fraction, respectively. Concurrent cisplatin 33 mg/m²/week was started Week 1. Patients completed the Quality of Life Radiation Therapy Instrument pretreatment (PRE), at end of treatment (EOT), and at 1, 3, 6, 9, and 12 months. Overall survival (OS), progression-free (PFS), LRC, and toxicities were assessed.

Results: Of 39 patients, 30 (77%) were alive without disease at median follow-up of 37.5 months. Actuarial 3-year OS, PFS, and LRC were 80%, 82%, and 87%, respectively. No failures occurred in the electively irradiated neck and there were no isolated neck failures. Head and neck QOL was significantly worse in 18 of 35 patients (51%): mean 7.8 PRE vs. 3.9 EOT. By month 1, H&N QOL returned near baseline (mean 6.2, SD = 1.7). The most common acute Grade 3+ toxicities were mucositis (38%), fatigue (28%), dysphagia (28%), and leukopenia (26%).

Conclusions: Hyperfractionated IMRT with low-dose weekly cisplatin resulted in good LRC with acceptable toxicity and QOL. Lack of elective nodal failures despite very low dose per fraction has led to an attempt to further minimize toxicity by reducing elective nodal doses in our subsequent protocol. © 2010 Elsevier Inc.

Hyperfractionation, IMRT, Chemoradiation, Head-and-neck cancer.

- Int J Radiat Oncol Biol Phys 2010, Apr 7 [Epub ahead of print]
Key Cooperative Group Trials in Coastal Carolina:

• RTOG
  – Prostate (multiple)
    • 0232: brachy +/- EBRT for intermediate risk
    • 0415: standard vs. hypofx for low risk

• Univ. Washington
  – Advanced Head & Neck
    • OSI: chemoRT +/- Tarceva
Patient Enrollment by Status 2004–2009

Underserved from 2004–2006
= African American Only

- Red: Underserved Enrolled Patients
- Blue: All other enrolled patients
Percentage of Underserved Patients per Total Patients Enrolled

- 2004: 33%
- 2005: 27%
- 2006: 17%
- 2007: 35%
- 2008: 72%
- 2009: 46%

- Red bars represent the percentage of underserved patients per total patients enrolled.
Exciting Current & New Clinical Trials

• Continued focus on prostate cancer
  – START: surveillance vs RT for low risk
  – R0232: brachy +- EBRT for int risk
  – R0815: “high-dose” RT +-hormones for int risk
  – R0534: bed+-nodes+-hormones post-prostatectomy

• SRS & SBRT – referring MD & patient excitement
Exciting Current & New Clinical Trials

• PI-initiated trials
  – Cosmesis of Hypofx RT s/p Standard or Oncoplastic Lumpectomy for Early Breast Cancer
  – Elective Nodal IMRT Dose De-escalation for Advanced HNSCC
  – SBRT for Oligometastases

• Mentor Institution Trials (WFUCCC)
  – Breast Biomarker Assay for RT Skin Toxicity
  – ArginMax for ED s/p Prostate RT
Highlights & Awards

• 2010 American Society of Clinical Oncology (ASCO) Clinical Trials Participation Award
  – Only Rad Onc practice in country to win!

• Highest accruing RTOG site in North Carolina
Conclusions

• Cancer clinical trial enrollment in the U.S. is poor, especially for underserved patients

• Obstacles include both patient & doctor factors

• The Cancer Disparities Research Partnership (CDRP) program was designed to help overcome this problem
Conclusions: Keys to Clinical Trial Success in Coastal NC

• Commitment from Referring MDs
• High-Volume, Disease-Focused Trials
• Hiring of Key Personnel & Expanding Practice
  – Research Nurses
  – New Physicians
• Goal-Oriented (Eyes on the Prize)
THANKS To:

• Our patients!
• Referring doctors
• My partners:
  – Dr. Papagikos, our PI for RTOG
  – Drs. Meyerson, Neal, & Nichols
  – Drs. Ali, Powell, & Rusthoven, our new additions
• Research nurses: Deb, Amy, Lynette, Monique
• CCRO & NHRMC Staff
• Academic partners:
  – UNC: Drs. Tepper, Marks, Rosenman, & Morris
  – WFU: Drs. Shaw & Urbanic