Optimization of Smoking Cessation Strategies in Community Cancer Programs for Newly Diagnosed Lung and Head and Neck Cancer Patients

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The benefits of tobacco cessation after cancer diagnosis are well-documented and important.

- Improved quality of life
- Increased treatment efficacy
- Improved wound healing
- Reduced risk of second primary
- Reduced risk of recurrence
- Improved survival
- Impact on family (cessation role model)
Very few studies have examined cessation interventions following cancer diagnosis.

- Wewers et al.
- Schnoll et al.
- Gritz et al.
- Park et al.
- Ostroff et al.

None have demonstrated results that demonstrate substantial impact.
These studies have a range of methodological and practical limitations.

1) Some have been too small to identify effect
2) Some have lacked pharmacotherapeutic arms or behavioral support arms (or combined arms)
3) Some have lacked appropriate controls
4) Most have been conducted at tertiary care cancer centers
Aims

- To identify an efficacious, implementable cessation strategy for lung and head and neck cancer patients undergoing cancer therapy in Kentucky cancer centers.

- To assess the feasibility of routinely implementing an array of smoking cessation strategies for this population.

- To deliver high quality smoking cessation to all subjects.
Methods

- Employ a Multiphase Optimization Strategy (MOST) approach to study design
- Conduct study in partnership with the Kentucky Clinical Trials Network (KCTN)
- Evaluate tobacco cessation outcomes using both patient-reported outcomes and biochemical verification (CO)
Study Protocol \(\rightarrow\) MOST

**STUDY SCHEMA**

**HIGH Intensity Counseling (12 sessions/6months) + Assigned Cessation Drug Regimen:**
- Condition 1: High Intensity Counseling + Long Acting NRT + PRN NRT
- Condition 2: High Intensity Counseling + Bupropion + PRN NRT
- Condition 3: High Intensity Counseling + Varenicline + PRN NRT
- Condition 4: High Intensity Counseling + Long Acting NRT (no PRN NRT permitted)
- Condition 5: High Intensity Counseling + Bupropion (no PRN NRT permitted)
- Condition 6: High Intensity Counseling + Varenicline (no PRN NRT permitted)

**LOW Intensity Counseling (min. 5-As, discussion, resources at Enrollment) + Assigned Cessation Drug Regimen:**
- Condition 7: Low Intensity Counseling + Long Acting NRT + PRN NRT
- Condition 8: Low Intensity Counseling + Bupropion + PRN NRT
- Condition 9: Low Intensity Counseling + Varenicline + PRN NRT
- Condition 10: Low Intensity Counseling + Long Acting NRT (no PRN NRT permitted)
- Condition 11: Low Intensity Counseling + Bupropion (no PRN NRT permitted)
- Condition 12: Low Intensity Counseling + Varenicline (no PRN NRT permitted)

**Salvage Plan:**
- If patient is smoking at Week 8
- Or
- If patient experiences toxicity that necessitates d/c assigned cessation drug regimen

Visits at Week 1, Week 4, Week 8, Week 12
• Kentucky Lung Cancer Research Program (KLCRP):
  
  – Established 2000 by Kentucky General Assembly to stimulate research in lung cancer. (KRS 164.476)

• KCTN: Provide innovative clinical trials, support and education for our research centers and scrupulous quality assurance.

• Alliance of physicians conducting trials in the prevention, early detection, and treatment of lung cancer.

• Multidisciplinary: medical oncologists, CT surgeons, pulmonologists, radiation medicine, cancer control, behavioral science, pharmacy.
• Sites located in every federal congressional district

• Research at Home: Patients remain in their community

• Physicians:
  – Opportunity to conduct clinical trials, expand research enterprise, pick & choose studies that support research goals and serve patient populations, from balanced study pipeline.
  – Expand IITs to multi-site

• Conduct investigator-initiated and industry sponsored trials. Phases I – IV

• Study Portfolio
  – Therapeutic Intervention, Screening Intervention,
  – Non-Interventional - epidemiologic, observational, behavioral, biospecimen
Coordinating Center, housed at Markey Cancer Center, liaison between sponsors and network investigators, facilitating operations:

- Site Membership
- Study & Site Selection
- Network Committee & Data Safety Monitoring Committees
- Research Education & Training
- Monitoring & Quality Assurance Auditing
- Data Management
- Project Development & Management
- Centralized Recruitment Support
- Contract & Budget Negotiation
- Regulatory; support, Central IRB
• Study Chair Support:
  
  - Assist to meet GCP & CFR responsibilities of Sponsor-Investigator (21 CFR 312.3)
    
    ✓ Select Qualified Investigators (21 CFR 312.50)
    ✓ Inform Investigators (Safety, Amendments, Ongoing Progress)
    ✓ Select Qualified Monitors & Ongoing Review of Investigation
    ✓ Maintain Adequate Records (Safety, FD, TMF)
    ✓ Assure IRB Reviews
  
  - Project Planning Teams: develop trials with insight to community-based sites, while maintaining integrity and scientific value of projects.
• Member Commitments:

  ✓ Compliance with applicable Code of Federal Regulations (CFR)

  ✓ Compliance with Good Clinical Practices (GCP) - assures that the rights & safety of study subjects are protected and integrity of study data.

  ✓ Belmont Report:
    • Respect for Persons, individual treated as autonomous agent and those with diminished autonomy (vulnerable) are entitled to protection.
    • Beneficence – DO NO HARM - minimize harm, maximize benefits and well being. Obligations of beneficence apply to individuals and society as a whole.
    • Justice – fair distribution of benefit and risks

  ✓ Institutional Assurance (FWA) & IRB Registration:
• 1,817 Subjects, in 75/120 counties (63% of state).
  ➢ Strong engagement to IITs
  ➢ 1,574 subjects to IITs
Cessation Outcomes

- **Clinician Reported Procedures & Outcomes**

- **Patient-Reported Outcomes**
  - Tobacco use/cessation
  - Psychosocial moderators
    - anxiety, depression, social support
  - Quality of Life/Symptoms (FACIT)
  - Others

- **Biochemical Verification**
  - carbon monoxide
Study Strengths

• **Innovation**
  – MOST approach to trial design
  – Generalizability of sample

• **Significance**
  – Focus on high risk group where impact is quick
  – Generalizability of sample and setting
  – Preparation for strong RCT
MOST Cessation Participating Sites:

1. **UK, Markey Cancer Center:** Valentino & Studts
2. **UL, Brown Cancer Center:** Perez & Kloecker
3. **Lexington VAMC:** Valentino
4. **Norton Cancer Institute - Louisville:** Davis
5. **Owensboro Health:** Faught
6. **Baptist Health Paducah:** Gould & Lopez
7. **Harding Memorial Hospital – Elizabethtown:** Lye
8. **Hazard ARH – Hazard:** Elsoueidi
9. **KY Cancer Clinic – Hazard:** Ghazal
10. **St. Claire Regional Medical Center – Morehead:** Lim
11. **King’s Daughters Medical Center – Ashland:** Goebel
12. **St. Mary’s Medical Center, HIMG – Huntington, WV:** Bir