Comprehensive Approach to Oral and Head & Neck Cancer

at the

VCU Medical Center

DRAFT PLANNING DOCUMENT
VCU Philips Institute for Oral & Craniofacial Molecular Biology – Vision for the future

- Comprehensive Institute in Oral and Head & Neck Cancer
- Prevention, Treatment, and Research
- A new brand for this VCU Chartered Institute
- Creating a vision for
  - Recruitment of Director and faculty
  - Energizing interest by faculty, chairs and deans
  - Donors and sponsors
Facts Regarding Oral and Oropharyngeal Cancer

- 6th most common cancer in the world
- 35,000 diagnosed in US each year and increasing
  - 460 in Virginia with 160 deaths
- Mainly self-induced disease associated with tobacco and alcohol use
- Human papilloma virus infection and immunosuppression linked as risk factor
- Most cases diagnosed late
  - Five year survival 80-90% with early detection
  - Only 45% with late detection
- Economic, gender and racial disparities
A comprehensive oral and head & neck cancer program can be interdisciplinary program including:

- School of Dentistry
  - Philips Institute for Oral and Craniofacial Molecular Biology
  - Department of Oral Pathology
- School of Medicine
  - Departments of Otolaryngology and Head & Neck Surgery, and Surgery
  - Departments of Radiation Oncology and Pathology
  - Division of Hematology and Oncology, Department of Internal Medicine
  - Public Health departments and biomedical sciences departments
- Massey Cancer Center
- School of Nursing
- School of Pharmacy
- School of Engineering
- School of Allied Health Professions
  - Departments of Occupational Therapy and Physical Therapy, Health Administration
- College of Humanities & Science – Psychology
- School of Social Work
- School of Education
- VCU Health System
- VCU Dental Faculty Practice Association
- VCU Athletics
- Virginia Dental Association
- McGuire VA Medical Center
What will a comprehensive approach include?

• Cancer control and surveillance program
• Pretreatment management
• Medical / surgical care program
• Post treatment management
• Reconstructive treatment
• Palliative care
• Biobehavioral management
• Counseling
• Drug development
• Clinical trials
• Cancer biology research
• Tissue engineering
• Practitioner education and training
Cancer control and surveillance

• Cancer epidemiology
• Behavioral prevention
  – Tobacco and alcohol use
• Health economics of oral and head & neck cancer
• Early assessment of lesions and recall evaluation
  – Evaluation of early detection products (e.g. Vizilite)
  – Establish a recall program for lesion evaluation
  – Link with VA Department of Health Tumor Registry
• Early referral for treatment
  – 120 cases per year of malignancy diagnosis by Department of Oral Pathology service
Interdisciplinary treatment and case management

- For patients with advanced disease, a tumor board approach is indicated and already exists
  - Tumor board can enhance clinical trial development and enrollment
- Medical/surgical treatment planning and post treatment management planned
- Includes oncologist, surgeons, dentists, therapist, nurses, social workers, psychologists
  - Surgical, radiation, chemotherapy
  - Pre and post treatment care
  - Therapy
  - Behavioral care
  - Palliative
Symptom and treatment effects management

- Preradiation therapy oral evaluation and treatment
  - Osteoradionecrosis prevention
  - Salivary gland protection
- Postradiation therapy
  - Oral mucositis, candidiasis, xerostomia
  - Caries prevention and restorative treatment
  - Infection control
- Restorative and reconstruction
- Speech and feeding therapy
- Behavioral health
Research

• Drug development and clinical trials
  – Anticancer drugs
  – Symptom management
  – Oral disease prevention and disease control

• Basic and translational science
  – Molecular therapeutics
  – Genetics & epigenetics
  – Signaling
  – Radiation biology
  – Control & prevention

• Bioengineering
  – Tissue engineering
  – Prosthetic materials
  – Controlled release devices
Education

- PhD program
- Develop core courses for medical, dental, nursing, pharmacy students
  - Etiology, tobacco, alcohol, viruses
  - Early detection
  - Therapy options
  - Recall programs
- Contribute to dental and medical resident programs
- Continuing education for practitioners
- Public health and community education
  - Tobacco & alcohol use reduction
Current Resources and Programs

• Head & Neck Tumor Board
• University support core research facilities
  – Tissue Data Acquisition & Analysis Core
• Greater than market share of new patients
  – 139 new oral and H&N cancer patients at VCUHS
  – VCU market share has increased to 86% in primary service area (PSA)
  – 32% of patients from outside PSA
  – But clinical trials accruals less than 5% for this cancer
• Existing epidemiological and clinical research
• Additional 30% indirect cost recoveries return to deans beyond standard
  university allocation through 2017 for new research faculty hires
• Virginia Department of Health within walking distance
New Funded Resources

- Cancer is a MCV Medical Center strategic top priority
- Funding support for 31 new faculty positions allocated in FY2011
  - Majority required to be cancer research or care expertise
- General assembly awarded $1M to Massey for research in stressed state budget year
- Supporting Massey Cancer Center Strategic Plan for improved detection, prevention, treatment, and control of cancer
  - Interdisciplinary collaborations in basic, clinical and translational research
  - Double clinical trials enrollment – 200 to 400/yr
  - Increase patient volume
- VCU recently awarded Clinical and Translational Science Award from NIH
- New created Clinical Trials Office staffed and operational
- Recent research funding to Massey from the Virginia Tobacco Commission
- Funds available to create new oral and H&N cancer clinic in School of Dentistry
School of Dentistry Specific Plans

• VCU Philips Institute for Oral and Craniofacial Molecular Biology
  – Search for Director and department chair
  – Existing permanent budget $367,000 excluding sponsored program awards
  – Additional $553,000 allocated for cancer and bioengineering research development
  – $1.7M from Philips contributions available to director for research development

• VCU allocated $620,000 permanent funding to SOD for clinical and translational research in oral cancer – to be leveraged by clinical and sponsored programs support
  – Additional cancer researchers
  – Maxillofacial Prosthodontist
  – Oral and H&N cancer pathologist/researcher
Recruitment of Director of Philips Institute and Chair, Department of Oral & Craniofacial Molecular Biology

- Create a national advisory committee to guide development
  - Leading director/researcher (H&N cancer SPORE directors)
  - NIDCR member
  - Dental leader
- Search for senior investigator
- Focus on finding director with strengths in areas ripe for collaboration
  - cancer cell molecular genetics
  - epigenetics
  - cell signaling
- Research areas that will enhance use of core research facilities
- Search at institutions with H&N cancer NCI SPORE grants
- Advertise with American Association for Cancer Research
- Journals: Cancer Cell, Nature Reviews in Cancer
Potential collaborators and audience

- Paul Fisher, Chair of Human and Molecular Genetics (molecular genetics)
- Paul Dent
- Lyn Penberthy (cancer epi)
- Sarah Spiegel, Chair of Biochemistry
- Charles Chalfant (tumor bank)
- Jean-Pierre Issa, UT MD Anderson Ca Ctr 713-745-2260
- Keith Kirkwood at MUSC
- David Sidransky, JHU SOM
- Silvio Gutkind, NIDCR, Oral & Pharyngeal Cancer Branch