



Head and Neck Cancer Survivorship: What the Research Tells Us

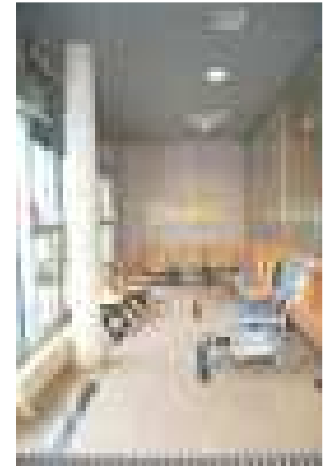
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Managing the Effects of Treatment**
Baltimore, Maryland
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H&N Cancer: My Introduction

Centre Georges-Francois
LeClerc Tumor Institut, Dijon



Horiot, J. C., Schraub, S., Bone, M. C., Bain, Y., Ramadier, J., Chaplain, G., Nabid, A., Thervenot, B. & Bransfield, D. (1983). Dental preservation in patients irradiated for head and neck tumors: A 10-year experience with topical fluoride and a randomized trial between two fluoridation methods. Radiotherapy and Oncology, 1, 77-82.

Bransfield, D. D., Horiot, J. C. Bone, M. C. (1986). High compliance with fluoride treatment by patients irradiated for head and neck tumors: A theoretical interpretation. Journal of Psychosocial Oncology, 4(3), 43-51.

Office of Cancer Survivorship



- Established in June 1996, and began managing extramural grants in FY97 by supplementing 20 cooperative agreements to examine long-term side effects
- Defines “survivor” as anyone diagnosed with cancer, from the time of diagnosis to the end of life (NCCS), including caregivers and family members

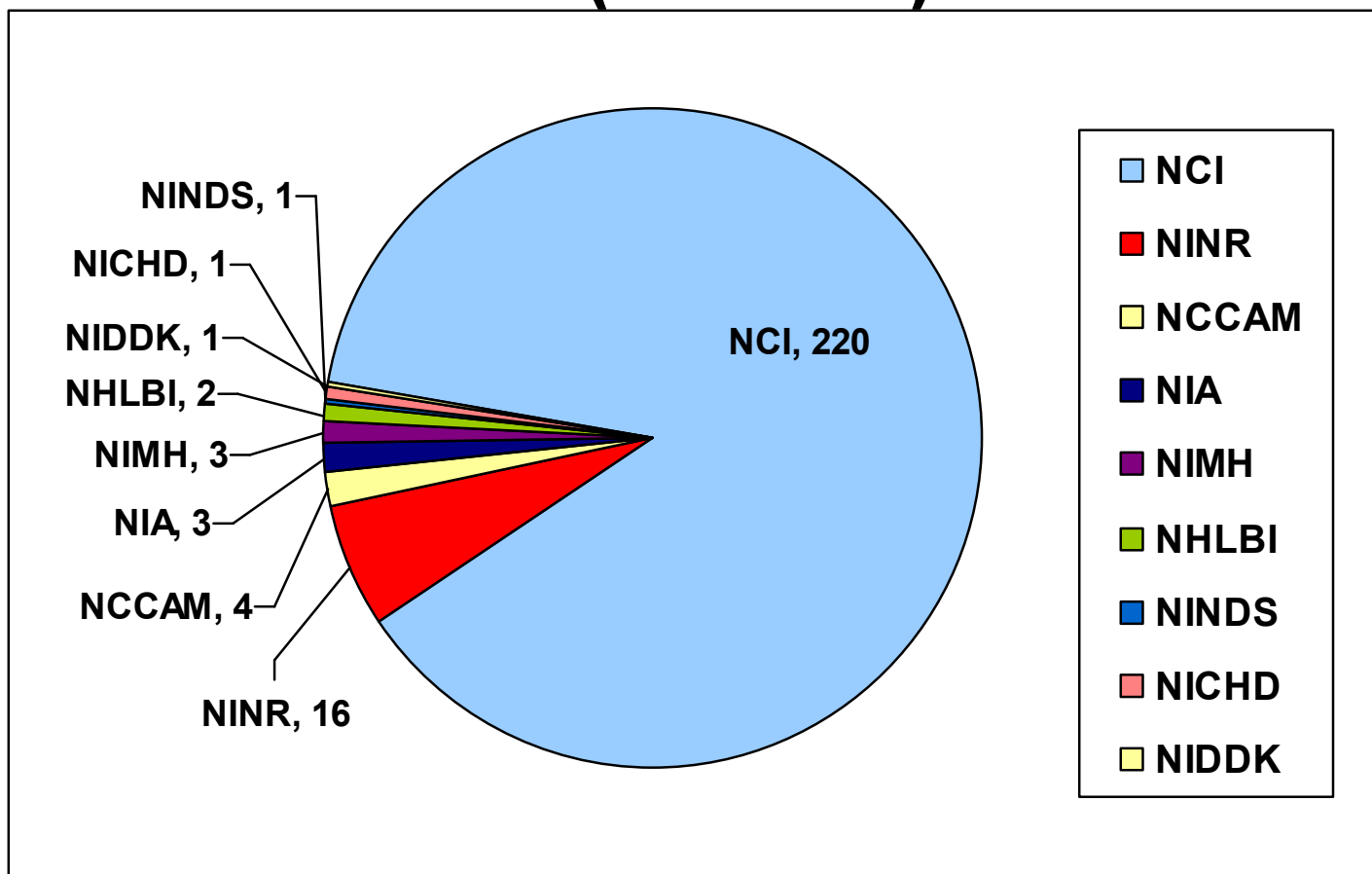
<http://dccps.cancer.gov/ocs/>



OCS Mission

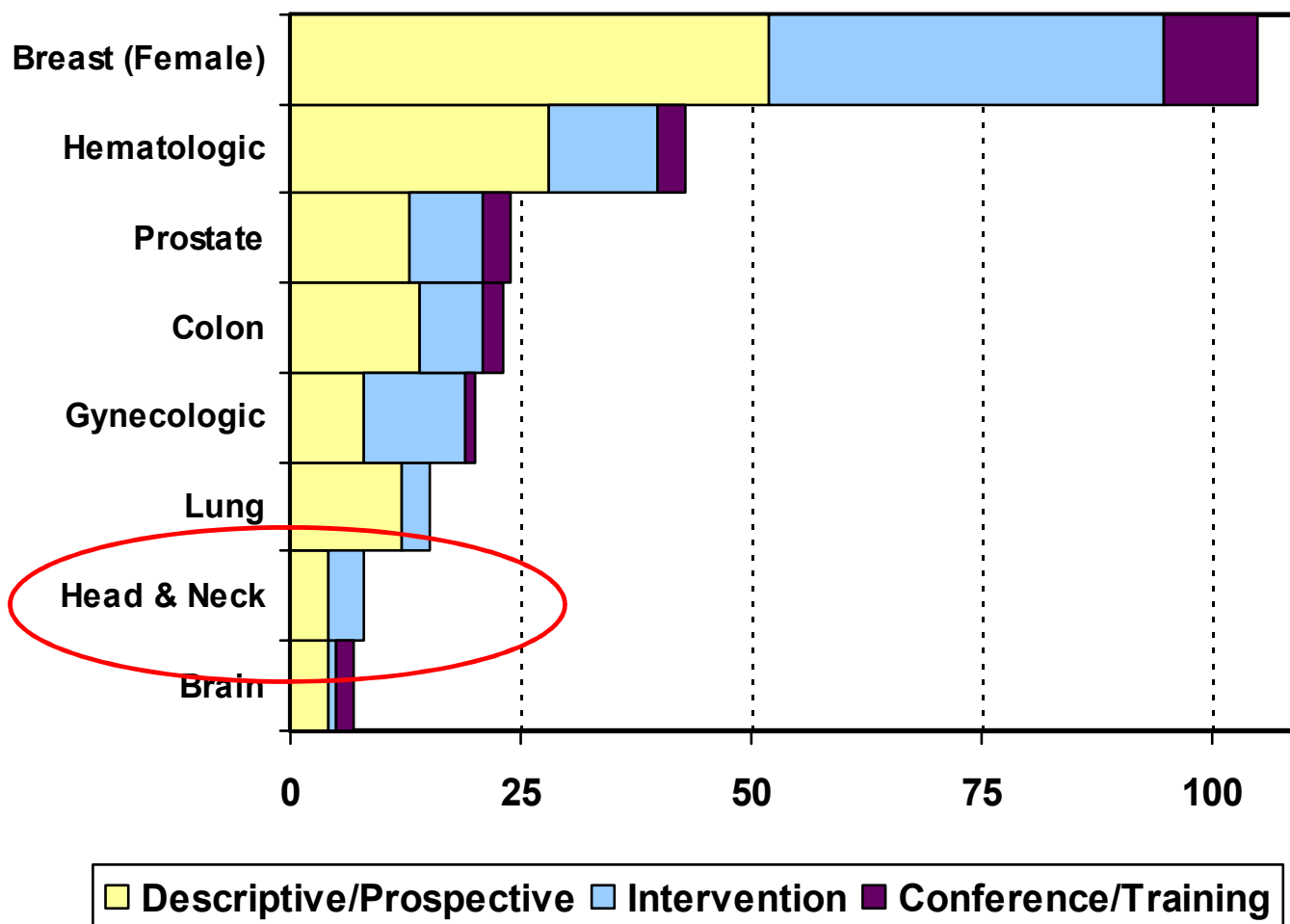
- Enhance the length and quality of survival of all cancer survivors
- Support research that helps us understand, prevent, or reduce adverse physical, psychosocial, and economic outcomes associated with cancer and its treatment
- Educate professionals about issues related to cancer survivorship

NIH FY06 Cancer Survivorship Research Grants by Institute (N = 251)



NIH FY06 Survivorship Research Grants by Cancer Site

(*Grants may have > 1 focus)



Major H&N Cancer Survivorship Concerns

- Physical Well-being
 - Cancer control
 - Nutrition
 - Activities of daily life
 - Pain
 - Sensory changes
- Emotional Well-being
 - Mood/coping
- Communication
 - Speech and
- Social Functioning
- Economic/Health Insurance
- Employment

Quality of Life v. Quantity of Life



NIH Funded Research in H&N Cancer Survivorship

Jeri Logemann, Ph.D., and colleagues

Northwestern University, Department of Communication Sciences and Disorders

- Funded by NCI and National Institute on Dental Research

Purpose

- Compare swallow function of pts treated by RT alone (n = 12) or chemoRT (n = 36) for oropharyngeal cancer

Findings:

- All had swallowing problems pre-treatment
- Swallow function worse among those treated with chemoRT
- Swallowing function may worsen over several years post-RT
 - ↓ Tongue base retraction and tongue strength
 - Delayed pharyngeal swallowing
 - Delayed Vestibule closing
 - Reduced anterior-posterior tongue movement
 - Reduced saliva production

NIH Funded Research in H&N Cancer Survivorship

- 56% received swallowing therapy, average of 4 (range 1 – 21)
- Reasons for not getting needed swallowing therapy
 - Economic
 - Not covered by many insurance plans
 - Access to rehabilitative services
 - Felt too ill, particularly after chemoRT

Logemann, J. A., et al. (2008). Head & Neck, 30, 148-158.

NIH Funded Research in H&N Cancer Survivorship

Henrietta Logan, Ph.D., University of Florida

- **Survey of what adults knew about oral cancer and its risk factors**
 - **46% never heard of it or stated they knew relatively nothing about it**
 - **Tomar, S.L. & Logan, H.L.(2005).J Public Hlth Dentistry, 65(4):221-230**

Survey of 100 H&N cancer survivors > 5 yrs post Rx
Administered large battery of tests, including assessments of physical function, tobacco and alcohol use, anxiety, depression, fatigue, self-consciousness
~20% depressed, using tobacco and alcohol

NIH Funded Research in H&N Cancer Survivorship

Gerry Funk, M.D., University of Iowa

Purpose: Examine social support and quality of life in 394 H&N cancer survivors about 1 yr from diagnosis

Findings:

- Social support positively associated
- Speech function
- Lower depression
- Aesthetics

Karnell, L.H. et al. (2007). Head & Neck, 29:143-146.

NIH Funded Research in H&N Cancer Survivorship

Gerry Funk, M.D., University of Iowa

Purpose: Evaluate the prognostic value of patient self-reports of general physical health in 403 H&N ca survivors

Findings:

- Pts who did not recover from low physical component summary at 3 months more likely to die within 3 years
- Physical component summary was predictive of overall and cancer-specific survival
- Change in self-reported health status in first year since diagnosis is strong prognostic indicator

Jameson, M.J., Karnell, L.H., Christensen, A.J. & Funk, G.F. (2008). Arch Otolaryngeal Head Neck Surg, 134(9):958-964

Veterans Affairs and NCI Funded Research in H&N Cancer Survivorship

Sonia Duffy, PhD, RN et al., VA Ann Arbor Health Care System

Purpose: Examine is quality of life affects survival among 495 H&N cancer survivors

Results: Controlling for time since diagnosis, sociodemographic characteristics, tumor site & stage, and tobacco use (all independent significant survival predictors):

- Overall physical function and pain, speech, and eating measures predicted survival
- Mental and emotional function NOT associated with survival
- Sex, race, and alcohol use NOT associated with survival

Karvonen-Gutierrez, C.A., et al. J Clin Oncol, 26(16):2754-2760.

NIH Funded Research in H&N Cancer Survivorship

Pamela F. Short, PhD, Pennsylvania State University, NCI funded

- Purpose: Examine effect of cancer on employment and disability, including 58 H&N ca survivors
- Findings: Among H&N ca survivors, females had higher disability than males
 - ? Effected social function
 - ? Body image

Short, P. F., et al. (2005). *Cancer*, 103(6):1292-1301.

NIH Funded Research in H&N Cancer Survivorship

Heidi Silver and colleagues, Vanderbilt University, ACS/NIH-NCRR funded

- Purpose: Examine body mass and body composition, physical symptoms among 17 patients with advance stage H&N cancer treated with chemoRT
- Findings:
 - Lean body mass accounted for most of body mass loss, and predicted decline in physical function
 - LBM independent of dietary intake
 - All pts started losing weight 1 week after Rx

Silver, H.J., Dietrich, M.S., & Murphy, B.A. (2007). Head & Neck, 29: 893-900.

NIH Funded Research in H&N Cancer Survivorship

Paul Evitts, Ph.D., Towson University

Eye-Gaze Tracking of Normal Listeners to
Alaryngeal Speech

Purpose: Investigate the role of visual
information on normal listeners when
communicating with an individual with
alaryngeal speech

Results: In progress

Recommended Reviews



- Rogers, S.N., Ahad, S.A., & Murphy, A.P. (2007). A structured review and theme analysis of papers published on 'quality of life' in head and neck cancer: 2000-2005. *Oral Oncology*, 43(9):843-868.
- Starmer, H.M., Tippett, D.C, & Webster, K.T. (2008). Effects of laryngeal cancer on voice and swallowing. *Otolaryngologic Clinics of North America*, 41:793-818.

What Does the Research Tell Us?

- Issues of H&N cancer survivorship not understood by general population
- Physical functioning appears to be key to survival
- Lean body mass is the critical element in weight loss or changes in body composition
- Social support important (necessary) for positive outcomes
- Need continued, sustained research that keeps pace with changing treatment modalities

- Lack of resources to support rehabilitation
- Most survivors are getting some counseling with respect to tobacco/alcohol use, but around 20% don't adhere to recommendations to quit.

Research Gaps in H&N Cancer Survivorship



Functional status and symptom management

- **Rehabilitative needs and interventions**

Needs of special populations

- **Very elderly, particularly those without spouses**
- **Rural populations**
- **Immigrant populations**
- **Minority populations**
- **Caregivers**
- **Families**