U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
NATIONAL INSTITUTES OF HEALTH
NATIONAL CANCER INSTITUTE (NCI)
AND
AMERICAN ASSOCIATION FOR CANCER RESEARCH (AACR)

NCI-AACR CANCER PATIENT TOBACCO USE ASSESSMENT TASK FORCE

The Task Force assigns highest priority to the following list of research endpoints and topics.

Defining the population: We suggest that high priority be given to research regarding cancer patients who continue to smoke cigarettes following diagnosis as well as those who recently quit (within 1 year prior to diagnosis).

Research Priorities:

1. Determine the effects of tobacco and other forms of nicotine use by cancer patients as well as the benefits of tobacco cessation (before diagnosis, during treatment, or during survivorship). Research in this area could include:
    a. Effects on medical outcomes
        i. Tumor response
        ii. Disease progression or recurrence
        iii. Second primary cancer
        iv. Survival and mortality
    b. Effects on cancer treatment efficacy
    c. Effects of tobacco/nicotine use and cessation on adverse effects and complications of cancer treatment; recovery from surgery and other cancer treatment
    d. Effects of tobacco/nicotine use and cessation on needed dose, duration and other characteristics of cancer treatment delivery
    e. Effects on symptoms, psychosocial outcomes and behavioral factors, including:
        i. Quality of life
        ii. Mental health
        iii. Adherence to cancer treatment and post-treatment procedures

2. Determine the effects of nicotine and other tobacco constituents in all forms of products (tobacco, nicotine replacement therapy, e-cigarettes and other electronic nicotine delivery systems) and the mechanisms of effects, on cancer biology
    a. Carcinogenesis
    b. Proliferation
    c. Angiogenesis
    d. Migration/invasion and metastasis
    e. Inflammation
    f. Immune modulation
    g. Tumor microenvironment
    h. Viral carcinogenesis and effects of viruses on cancer therapy (such as HPV)
    i. Metabolism of cancer therapeutic agent
    j. Chemotherapeutic resistance
    Note: these effects have implications for tumor vaccine development, as well as for the need to develop animal/in vivo models of tobacco and cancer treatment/biology, as opposed to cellular models.

3. Determine optimal strategies for implementing tobacco use cessation and prevention within the cancer setting
    a. Evaluate the most effective platforms to promote system wide identification of users of tobacco (and other forms of nicotine intake, such as e-cigarettes) and recent quitters using electronic health records and meaningful use criteria
    b. Evaluate the most effective means of delivering tobacco cessation treatment to all such individuals, including motivational approaches for the ambivalent tobacco user and telemedicine for patients who live at a distance. *Centralized tobacco dependence care can reduce provider burden and address barriers to treatment.*
    c. Evaluate the effects of potential cessation treatment moderators. Where appropriate, develop focused approaches to ameliorate those effects. Moderators may include:
        1. Psychiatric co-morbidities
        2. Genetics (pharmacogenetics)
    d. Assess role of biochemical verification
    e. Evaluate cost-effectiveness
    f. Determine the optimal cancer and cessation treatment timing. Should cessation treatment precede or even delay some forms of cancer care?
        1. Risk and benefit
        2. Optimal timing, duration and intensity of treatment
    g. Consider and inform provider behavior