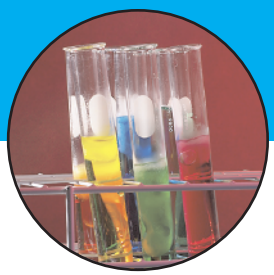


Cancer Facts

Cancer Clinical Trials:

Participation by Underrepresented Populations

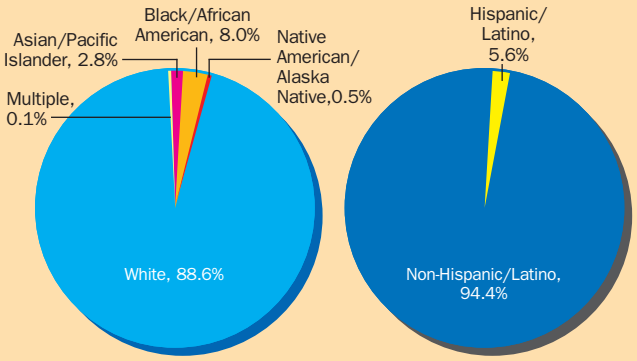
INTRODUCTION

- Clinical trials are a critical resource for the discovery of new prevention, diagnostic and treatment methods for cancer. Many of today's most effective prevention and treatment modalities are based on previous clinical trial results. [1,2]
- Only about 3-5% of the 10.1 million adults with cancer in the U.S. participate in cancer clinical trials. This low rate stands in sharp contrast to the 60% participation of children with cancer. [1,3]
- Certain populations, such as those that are low income, elderly, racial/ethnic minorities or those who live in rural areas have the smallest percentage of clinical trial participants. Unfortunately, these same populations also bear a disproportionate burden of cancer morbidity and mortality. [4-6]
- Without adequate representation of these populations in clinical trials, researchers cannot learn about potential differences among groups and cannot ensure the generalization of results. [7-10] In addition, participation in clinical trials increases access to state-of-the-art cancer care, a critical factor in many minority and underrepresented populations that suffer disproportionately from cancer. [2,4,5]

Disparities in Clinical Trials

- The National Cancer Institute (NCI) is the largest sponsor of cancer clinical trials in the U.S., with approximately 800 ongoing trials at 3,000 sites. Over 30,000 patients are enrolled in cancer clinical trials annually. From 1998-2001, total enrollment in NCI-sponsored treatment trials increased 22%. However, the number of minority participants during that period remained stable, causing a decrease in the overall percentage of minorities in trials.[4,11]
- A review of Food and Drug Administration (FDA) approved drugs from 1995-1999 revealed that African Americans, Asian/Pacific Islanders, Hispanics/Latinos and Native Americans collectively represented less than 10% of participants in trials that were testing cancer drugs.[12]
- The rate of participation in U.S. clinical trials is correlated with the demographics of income, educational attainment, employment status, and insurance coverage. Regardless of race or ethnicity, low socioeconomic status has a negative impact on clinical research participation.[5,13,14]
- The Coalition of Cancer Cooperative Groups evaluated accrual to NCI publicly funded treatment trials from January 2003 through June 2005. The data presented in the figures at right show accrual rates by racial and ethnic status:

Enrollment by Race and Ethnicity
National Cancer Institute, Publicly Funded Cancer Clinical Trials
(Phase I-III Treatment Studies)
January 1, 2003 – June 30, 2005



Source: Baseline Study of Patient Accrual Onto Publicly Sponsored Trials," Coalition of Cancer Cooperative Groups for the Global Access Project, National Patient Advocate Foundation, April 2006.

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- In 2004, the SELECT prostate cancer prevention trial completed recruiting over 35,000 men of whom 21% were minorities. However, previous NCI-sponsored prevention trials have not recruited significant numbers of minorities or other subpopulations. [15] For example, NCI's Prostate Cancer Prevention Trial, which was conducted in 1993-2003, recruited only 8% minority participants of over 18,000 men enrolled.[16]

Underrepresented Populations

- ***Adolescents:*** Only 10% of 15-to-19 year old adolescent cancer patients are entered into trials, compared to 60% of those under the age of 15.[17,18]
- ***Elderly:*** According to Lewis and colleagues, 61% of new cancer cases occurred among the elderly in 2003, but only 25% of participants in national cancer clinical trials were over 65 years of age. Moreover, in Phase II and III clinical trials, the elderly carried 60% of the disease burden but represented only 32% of enrolled patients.[19]
- ***Racial/Ethnic Groups:*** Enrollment in clinical trials is disproportionately low among African Americans/blacks and Hispanics/Latinos in NCI-sponsored surgical trials.[6,13]
- ***Rural:*** Among 24,332 patients enrolled in NCI sponsored clinical trials over a one-year period, investigators found marked regional and state variations in patient accrual, and suburban geographic areas had the highest overall accrual.[20]
- ***Women:*** An investigation of nonsurgical NCI cancer trials demonstrated that women were less likely than men to be enrolled in colorectal and lung cancer trials.[6]

Patient Barriers to Cancer Clinical Trial Participation

- ***Cost/Lack of insurance:*** Costs associated with clinical trials are often a concern. A study of NCI-sponsored cancer treatment trials found that uninsured patients represented only 5.4% of all clinical trial participants.[20] Even when participants have insurance, some private third-party payers do not cover the full costs associated with participating in the clinical trial.[11] Numerous studies have shown that the cost for a patient to take part in a clinical trial is not necessarily any more expensive than it is for the patient to receive standard cancer care.[11,21-23]
- ***Cultural barriers:*** Many people from various ethnic and cultural backgrounds may have views that differ from Western medicine. As a result, some beliefs regarding health and disease (e.g., family involvement in decisions about treatment, views regarding traditional healers, religion, prayer, and alternative medicine) may make clinical trials a less desirable option.[1]
- ***Lack of awareness:*** A national survey of cancer patients found that 85% of respondents were unaware that participating in a clinical trial was a treatment option for them.[24,25]

- ***Lack of invitation:*** According to a review of enrollment decisions for health research studies, racial and ethnic minorities were less likely to be invited to participate in research studies compared with non-Hispanic/Latino whites.[26]
- ***Language/Linguistic differences:*** Many U.S. clinical trials require English proficiency for potential participants, automatically excluding those who do not speak the language.[27] Language factors also pose a serious barrier to provider-patient communications and attempts to recruit patients into clinical trials.[5]
- ***Low literacy:*** The complexity of consent forms and other clinical trials materials may also be a barrier to those patients with low literacy. For example, the initial consent form for the STAR trial, a national breast cancer prevention trial, was over eight pages long and required a 10th grade reading level. [28]
- ***Mistrust:*** According to a review conducted by the Agency for Healthcare Research and Quality[8] and others [2, 29-32] mistrust of research and the medical system is a frequently reported barrier to participating in clinical trials.
- ***Practical obstacles:*** Transportation to and from a trial, particularly if it is located in a distant location, can be a barrier for many patients. Individuals with low incomes may find it difficult to take time off from work, find childcare or manage other family responsibilities while participating in a trial.[1,33]
- ***Study design eligibility criteria:*** Strict inclusion and exclusion eligibility criteria are a commonly reported barrier to trial participation.[8, 34-38] For example, in a study of African American/black cancer patients, only 8.3% were eligible for clinical trial participation due to strict eligibility criteria. Nearly 20% of them were excluded due to the presence of additional health problems.[34]

Physician/Investigator Barriers to Referring Patients to Cancer Trials

- ***Lack of minority investigators:*** Increasing the diversity of the investigator pool has been cited as an important strategy to increase recruitment of racial and ethnic populations to clinical trials. Yet, 2005 data show that African Americans/blacks, Hispanics/Latinos, American Indians/Alaska Natives, and Native Hawaiians/Pacific Islanders collectively represent less than 10% of all U.S. medical school faculty who have an M.D. or Ph.D.[39]

  Compared to non-Hispanic/Latino white physicians, Hispanic/Latino physicians were significantly less involved in clinical trials and found less value in them. This in turn, may influence their decision to refer patients to be enrolled in clinical trials.[40]
- ***Lack of physician referral:*** Although physician referral is one of the most effective means of recruiting patients to cancer clinical trials,[41] some physicians are reluctant to engage in referral. This may be because they believe that standard therapy is best, or they fear losing control of the patient's care, or that referring or participating in a trial is an excessive administrative or financial burden to their practice. Some community physicians also indicate a mistrust of the academic or research centers conducting the trials.[1,38 42-44]
- ***Physician lack of awareness:*** Being unaware that clinical trials are available is one of the most common reasons physicians fail to refer patients to trials. [45,46] Primary care physicians do not have sufficient information on available clinical trials, and often leave the discussion of clinical research to the patient's oncologist. Yet, many oncologists outside of the academic setting may also not be aware of trials or otherwise choose not to participate in or refer their eligible patients to clinical trials.[47]

Public Attitudes toward Clinical Trials

- Research has shown that the general public is unaware of clinical trials as a treatment/prevention option or is misinformed about the clinical trials process. [1,25,48]
- Among surveyed U.S. adults who reported having ever participated in a clinical trial, 84% stated they would do so again if given a chance.[48]
- Most U.S. adults agree that clinical research participants are making a significant contribution to science. However, 49% also feel that clinical trial participants are gambling with their health and are treated like "guinea pigs." [48]
- Results from a recent study demonstrated that, in general, the more knowledgeable the respondent, the more likely the respondent was to participate in a clinical trial. However, regardless of their degree of knowledge, racial/ethnic minorities and those aged 18-24 years reported being reluctant to participate.[49]

Clinical Trial Policies and Mandates

- ***Center for Medicare and Medicaid Services:*** In 2000, Medicare authorized the payment of routine care costs for beneficiaries who are patients in clinical trials.[50]
- ***FDA:*** The FDA Modernization Act of 1997 provides guidelines on standardization of data collection of racial/ethnic groups in clinical trials, but does not address appropriate racial and ethnic inclusion.[51]
- ***NIH:*** The NIH Revitalization Act of 1993 mandated that women and minorities be included in clinical trials.[48] However, over a decade later, minorities continue to be underrepresented at varying levels in both cancer prevention and treatment trials.[8]
- ***States:*** As of 2007, only 20 states in the U.S. ensured the reimbursement of routine medical costs for clinical trial participants by legislative mandates or agreements with large health insurers. [52]

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