Cancer Control
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Connecting Trains

In order to simplify clinical trials, classic designs have avoided including patients with comorbidities or functional limitations. Yet, most cancers occur in the elderly, and most elderly patients have comorbidities or functional limitations.[1] So as the clinician or the researcher tries to treat older patients, they rapidly get the feeling of being in a crowded train station with trains coming and going from multiple directions at one time and not many indicator panels. Yet, after passing the first disorienting moment, one can realize that a busy train station is also a great opportunity: many connecting trains will offer you options to reach your destination. Such is the case with geriatric oncology. While comorbidities may confound a decision, they can also influence the course of cancer. Understanding how this happens may lead to more effective cancer treatments. Progress in the biology of aging might lead to a better understanding of tumor biology and reciprocally. We will explore some of these aspects in this issue of *Cancer Control*.

Aging and Frailty

What is aging? What is frailty? How do they impact treatment? Dr Balducci reviews some of the recent issues in the definition of aging and frailty, as well as instruments that have been proposed to measure them. Could these geriatric concepts improve patient stratification, treatment selection, and supportive care in oncology?

Likewise, aging is related to an increasing comorbidity burden. In the second article, I review how this affects the risk and prognosis of cancer. For example, comorbidity can have as much of an effect on relapse as adjuvant chemotherapy has for colon cancer. One obvious conclusion is that conducting clinical trials without controlling for comorbidity is like conducting clinical trials without controlling for ECOG performance status: taking significant risks with the balance of the treatment arms and losing clear prognostic information. The interaction could also point to significant biological interactions, using a bedside to bench approach.

Aging and Cancer

Dr Anisimov then explores several aspects of molecular and cellular biology that are implicated in both aging and cancer. He illustrates how this is relevant for the interaction of the two. He also illustrates, with the example of biguanides, how these biological mechanisms could possibly be reversed.

The impact of age on the pharmacokinetics and pharmacodynamics of anticancer drugs is an important issue. Drs Hurria and Lichtman extensively review the pharmacokinetics studies of chemotherapy in older patients. While there is often little difference in pharmacokinetics with age, they note that there is a much more consistent difference in pharmacodynamics, notably on hematologic toxicity. Dr Wedding and colleagues further address how age changes the clinical toxicity of chemotherapy across various regimens and tumor types.

Cancer Trials for the Elderly

A recent development in oncology is the conclusion of several randomized trials establishing the effectiveness of adjuvant chemotherapy in non-small-cell lung cancer (NSCLC). However, these studies included mostly young patients, leaving us to question the validity of these results for the 50% of NSCLC patients who are older than 71 years of age. Dr Gridelli and colleagues review the topic of adjuvant chemotherapy for older NSCLC patients.

Another way to look at the impact of adjuvant trials in the general population is to look at tumor registry data. Dr. Balasubramanian and coauthors conducted a case-control study in the New Jersey cancer registry on the adjuvant treatment of breast cancer. They found that while almost all patients received surgery, treatment patterns were more variable for systemic treatment and diverge on several aspects from NCI recommendations. They also observed that 20% of their patients had a history of a previous cancer. This is consistent with recent data presented at the 7th conference of the International Society of Geriatric Oncology (SIOG) in The Hague, Netherlands, November 2-4, 2006. Patients in their 70s and above treated in Florida centers also have a prevalence of about 20% of previous or concomitant cancer.[2] Likewise, older patients followed in a Dutch cancer registry have a 16% prevalence of previous cancers.[3] Therefore, the occurrence of multiple cancers emerges as a significant issue in older cancer survivors that warrants further research.

Although we have made some progress, the map is still scanty to guide us in the mountainous country of geriatric oncology. Yet, half of our cancer patients live there. So let us bring the railroad crew there, improve the connections, and design better maps and timetables.

Cancer, Culture and Literacy

I should not end before mentioning the two articles in our regular "Cancer, Culture and Literacy" feature. The first, from a team at the H. Lee Moffitt Cancer Center & Research Institute, proposes a checklist, the CLEAN (Culture, Literacy, Education, Assessment, and Networking) checklist, to use in the design and conduct of community outreach programs for medically underserved populations. This approach is logical and seems to make a lot of sense. The second article, by a group from the Robert Wood Johnson Medical School at the University of Medicine and Dentistry of New Jersey and The Cancer Institute of New Jersey, examines changes in cancer risk that occur when immigrants from other countries settle in the United States. The changes can be appreciable, and the article presents the many differences that are apparent between Korean-American immigrants and their native counterparts.

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