

The Social Role of Scientific Associations in Iran: Cancer, Evidence Communication, and Public Health Advocacy

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Rep Radiother Oncol, **11** (1), 159-160

Submission Date: 08/01/2025 Acceptance Date: 09/04/2025

Scientific associations increasingly influence public health beyond clinical practice, particularly in low- and middle-income countries. Cancer in Iran should be recognized not only as a medical condition but also as a societal challenge with substantial health, social, and economic consequences. While governments remain responsible for developing and implementing national cancer policies, they cannot fully address the growing complexity of cancer control alone. Scientific associations functioning as independent non-governmental organizations (NGOs) are uniquely positioned to translate scientific evidence into accessible public knowledge, strengthen health literacy, and advocate for evidence-informed policies and equitable cancer care.

Cancer has become one of the leading public health challenges in Iran. During the past decade, both cancer incidence and mortality have increased steadily, driven by population aging, urbanization, unhealthy lifestyles, and environmental risk factors [1-3]. National cancer registry data indicate rising rates of breast, colorectal, lung, and stomach cancers, reflecting the growing burden of the disease [4 5]. Beyond its clinical impact, cancer imposes considerable emotional, social, and economic burdens on patients, families, healthcare institutions, and the national health system [6, 7]. These challenges are particularly severe for individuals living in rural areas and those with limited financial resources, where treatment costs, income loss, and prolonged medical care frequently result in catastrophic financial hardship [8].

Addressing this burden requires more than improvements in diagnosis and treatment. Effective cancer control depends equally on prevention, early detection, and public awareness. Increasing public understanding of cancer risk factors, early warning signs, and the benefits of timely screening remains one of the most effective strategies for reducing cancer-related morbidity and mortality. Nevertheless, inadequate health literacy, fear, cultural misconceptions, and stigma continue to delay healthcare seeking in many Iranian communities, often leading to diagnosis at advanced stages [9, 10].

Educational interventions delivered through television, social media, schools, and community-based programs have been shown to improve awareness, encourage participation in screening programs, and promote earlier diagnosis [11, 12].

Despite these opportunities, governments alone cannot adequately manage the expanding cancer burden. Resource limitations, disparities in access to oncology services, shortages of specialized healthcare professionals, and deficiencies in early diagnostic infrastructure continue to hinder effective cancer control [6,7]. Furthermore, the broad demands of cancer prevention, psychosocial support, survivorship care, public education, and evidence dissemination extend beyond the capacity of governmental health systems. These challenges highlight the need for complementary organizations that can strengthen national cancer control efforts while addressing unmet community needs [11, 13].

Scientific associations functioning as independent non-governmental organizations represent one of the most valuable partners in this process. Operating independently while supporting national health priorities, these organizations complement governmental initiatives by extending the reach and effectiveness of public health programs [14]. Their multidisciplinary membership including physicians, researchers, public health specialists, educators, and other healthcare professionals enables them to integrate scientific evidence with practical community engagement. Their scientific credibility and professional independence position them as trusted sources of health information for both policymakers and the public [12, 14, 15].

Beyond their scientific and educational responsibilities, these organizations contribute substantially to evidence communication and public engagement. By translating complex scientific findings into clear, culturally appropriate language, they enable individuals to make informed health decisions and bridge the gap between research and everyday practice [16]. In cancer control, this includes improving public understanding of risk

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factors, promoting participation in screening programs, encouraging early diagnosis, and increasing awareness of available treatment options.

Scientific associations also play an important role in disseminating clinical and public health guidelines. By converting technical recommendations into practical guidance for healthcare professionals and the general public, they facilitate the adoption of preventive behaviors, strengthen adherence to evidence-based practice, and improve health literacy. Through continuing education programs, community outreach, media engagement, and public awareness campaigns, these organizations contribute directly to more effective cancer prevention and control [11].

Equally important is their contribution to evidence-informed policymaking. Drawing upon scientific expertise, professional consensus, and public trust, scientific associations can support governments in designing, implementing, and evaluating policies that strengthen cancer prevention and control. Their advocacy may contribute to the development of organized screening programs, improved access to early diagnosis, equitable oncology services, and stronger national cancer strategies [13, 14]. In this capacity, scientific associations serve as trusted intermediaries between researchers, healthcare professionals, policymakers, and the public, ensuring that scientific evidence informs both policy decisions and public understanding.

Recognizing cancer as a shared societal responsibility rather than solely a clinical problem provides a stronger foundation for sustainable cancer control. Independent scientific associations should therefore be viewed as strategic partners in national health governance. By promoting health literacy, translating scientific evidence into accessible public information, disseminating evidence-based recommendations, and advocating for effective public policies, these organizations can complement governmental efforts and strengthen the national response to cancer. Supporting their active participation in public education, evidence communication, and policy advocacy may contribute to earlier diagnosis, reduced cancer mortality, improved access to preventive services, and better long-term cancer outcomes in Iran.

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