

Embedding Technology in Cancer Control

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Incorporação Tecnológica no Controle do Câncer

Incorporación de Tecnología en el Control del Cáncer

Andréia Cristina de Melo¹; William de Oliveira Avellar²

Technological embedding is part of the interactive process of research and innovation of goods and services¹. In this perspective, it is innovative because it brings potential changes in its scope able to create new products, processes and methods which may translate into sanitary, social and economic benefits for the general society as costs downsizing of diseases treatment, productivity and competitiveness breakthrough and most of all, better quality of products and services to the end-user. In the most diverse scenarios, the incorporation of new technologies involves betterment of operational and management structures, routines and technical advances, among others.

Further to quite often high financial investment, the incorporation/implementation of a novel technology into the business environment or production of health services hinges basically on the ability of individuals and divisions directly or indirectly working in it to learn and develop new knowledge, skills and attitudes. This requires an innovative management approach with a creative combination of disciplines and perspectives, core-elements affecting this process².

Neoplasms are significant threats to health and global development with great impact in low-and-middle income countries. Close to 23.6 million new cases and 10 million deaths by cancer in 2019 worldwide were detected, it is an alarming accrual of 26.3% in incidence and of 20.9% in mortality compared with 2010³.

Science matters. Clinical trial in cancer matters. With them, preparation and launching of new additions to oncologic care are palpable. Early and precise detection of cancer is mandatory and for this, technology is decisive, likewise in the treatment of tumors, from initial to advanced stages.

Medicine digitalization, more accurate imaging methods and diagnosis, improvement of screening procedures, novel surgery techniques and radiotherapy are the corollary of technology. In regard to systemic treatment, precision oncology (which, more than often, boosts life expectancy and cure rates with cancer patients-centered treatment plans), multiple systemic new therapies and even genome editing more recently have come forward. In unprecedented scale and velocity, the deep comprehension of different neoplasms, their molecular shifts, tumor heterogeneity and relation of cancer with the microenvironment where it onsets is happening.

The development of researches and embedding of new chemical, biotechnological, electronic and mechanical-based technologies into cancer control in public and private networks is an opportunity to broaden the access to health goods and services for the population in addition to articulation among health, industry and economy^{4,5}.

Besides the development, how to incorporate often expensive new technologies in the daily practice of health caregivers involved in cancer care is the great challenge nowadays, because of the complexity and inequities of the Brazilian health system, reduced budgets and the innumerable cancer-related demands. This implies in overcoming obstacles and technological limitations of the public sector with more investments in the industrial production of health innovative assets and incentives to professional qualification to conduct clinical trials in oncology.

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¹⁻²Divisão de Pesquisa Clínica e Desenvolvimento Tecnológico do Instituto Nacional de Câncer José Alencar Gomes da Silva (INCA). Rio de Janeiro (RJ), Brazil.

¹E-mail: andrea.melo@inca.gov.br. Orcid iD: <https://orcid.org/0000-0002-1201-4333>

²E-mail: wavellar@inca.gov.br. Orcid iD: <https://orcid.org/0000-0003-3034-8553>

Corresponding author: Divisão de Pesquisa Clínica e Desenvolvimento Tecnológico do INCA. Rua André Cavalcanti, 37, 5º andar, anexo – Bairro de Fátima. Rio de Janeiro (RJ), Brazil. CEP 20231-050.



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