The role of biotechnology in the rehabilitation of the patients suffering from cancer.

Angel Casacó. M.D., Ph.D., Centre for Molecular Immunology, Havana, Cuba. casaco@cim.sld.cu

The incidence of cancer in Developed Countries as well as in Cuba is high; and it will continue increasing due to the cumulative probability related to the increase in life expectancy. Improvements in early diagnosis and treatment have significantly increased survival rates in recent years. Nowadays, many cancers can be considered as chronic diseases as diabetes mellitus or arterial hypertension are because they are related to senescence processes, they have no spontaneous regression or cure, they have slow but continuous progress, the outcome depend on the rate of progression, they are compatible with good quality of life (QOL) for a time, they are depending on the continuous care and the medical intervention aiming is to slow the progression rate, to improve the QOL and to prevent complications. Many biotechnology-derived biopharmaceuticals including cancer vaccines and monoclonal antibodies could be responsible of these effects due to they are very specificity to the malignant cells, they have lower toxicity and can be administered for longer period of time as compared to the traditional citostatic anticancer drugs. Physical and psychological therapy interventions, both established and new, often can reverse or ameliorate the impairments found in these patients, improving their ability to carry out daily tasks and actions and to participate in life situations. Measuring the efficacy of physical therapy interventions in each of these dimensions is challenging but essential for developing and delivering optimal care for these patients. Oncology rehabilitation has long been a part of management of cancer, but with increased survivorship and the development of new very-specific and very low toxic biotechnology-derived biopharmaceuticals, these efforts have evolved from simple supportive and palliative care to now include complex rehabilitation interventions designed to restore the integrity of organ structure and function, and to adapt to the environment so as to allow full participation in daily activities and life roles.