The WHO List of Essential Medicines includes medicines associated with cancer survival increase at a relatively low cost that are also off-patent.

Examples of medicines from the WHO Essential Medicines List used alone or in combination for curative treatment of common cancers:

- Bleomycin (e.g. for osteosarcoma)
- Colchicine (e.g. for acute leukemia)
- Carboplatin (e.g. for multiple cancers)
- Cyclophosphamide (e.g. for lymphomas, and testicular cancer)
- Doxorubicin (e.g. for lymphomas, testicular and ovarian cancers)
- Paclitaxel (e.g. for ovarian and breast cancer)
- Etoposide (e.g. for lymphomas, and testicular cancer)
- Ifosfamide (e.g. for osteosarcoma)
- Vinblastine (e.g. for lymphomas, testicular and ovarian cancers)

Despite recent advances in cancer management and treatment, access to and cost of cancer care remain challenges in many countries.

The primary modalities of cancer treatment are surgery, systemic therapy, and radiotherapy; these may be used alone or in combination. Of those cancer patients who are cured, curability is attributed as follows: surgery (49%), radiotherapy (40%) and chemotherapy (11%). Optimal treatment and diagnosis in early stages of disease have contributed to the decline in cancer mortality rates in most developed countries. In low- and middle-income countries (LMICs), limited access to affordable and quality cancer diagnostic and treatment has contributed to mortality-to-incidence ratios approximately 20% higher than those of industrialized countries.

The cost of cancer care has skyrocketed partly as a result of the development of expensive imaging techniques, radiation therapy equipment, and anticancer agents, including molecularly targeted therapies. As a result, the availability and receipt of treatment has been limited in many parts of the world. For example, despite approximately 80% of cancer patients being able to benefit at some point during the course of their disease from radiotherapy, this technology is far from being accessible to the 82% of the world’s population living in the developing world. LMICs have 60% of new cancer cases but only 32% of the radiotherapy machines available worldwide. Africa and South-east Asia face the largest shortages of radiotherapy units, with approximately 30 countries without radiotherapy services available.

Encouraging the lack of access to modern diagnostic services, surgical oncology, radiotherapy equipment and chemotherapy is a dramatic shortage of trained healthcare workers; which is a critical barrier to access to quality and equitable health services for cancer diagnosis and treatment. In Sub-Saharan Africa, trained pathologists, oncologists, and oncologic surgeons are exceedingly rare, and surgery is often performed by a general surgeon lacking specialty knowledge and skills. The time has come to challenge and dispense with the widespread assumption that cancer care is an activity reserved to well-trained medical oncologist and radiation oncologist. Global scientific approaches and innovation are needed to ensure greater affordability of and access to better value cancer care for all. Policymakers and several organizations are currently working to expand patient access to therapy and increase the number of trained workforce personnel, although challenges in leveraging existing infrastructure and lowering costs remain.

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Several countries and organizations are working to improve access to cancer care in LMICs.

To address the lack of radiotherapy services in developing countries, the International Atomic Energy Agency (IAEA) established an Advisory Group on increasing access to radiotherapy equipment in low- and middle-income countries. Through this platform, radiotherapy equipment suppliers and radiotherapy users in developing countries have come together to develop a radiotherapy equipment package that is affordable, sustainable and suitable for low- and middle-income settings. IAEA, through its Programme of Action for Cancer Therapy (PACT), has also promoted the expansion of radiotherapy services in cancer control plans in Albania, Nicaragua, and Tanzania, including supporting the training of key radiotherapy workforce personnel.