

Review Article

Open Access

Use of Medicinal Plants for The Treatment of Cancer in Different Parts of The World: An Overview

Mohammad Nadia¹, Maqsood Maryam^{2*}

¹Faculty of Life Sciences, Department of Zoology, Sardar Bahadur Khan Women's University, Quetta, Balochistan, Pakistan.

²Assistant Professor, Medical Microbiology, Department of Zoology, Faculty of Life Sciences, Sardar Bahadur Khan Women's University, Quetta, Balochistan, Pakistan.

*Corresponding author: Maqsood Maryam.

Abstract

Cancer has a devastating impact on the human population worldwide. Therefore, it is important to treat this deadly disease with new therapeutic strategies. The scientific community and researchers are focusing on treating cancer with the help of natural products because, in terms of side effects, natural products are safer than chemotherapy and radiotherapy. The Kingdom Plantae consists of tons of different herbs and metabolites that can be used as anticancer drugs. As these medicinal plants play an important role in cancer treatment, new techniques are emerging to develop drugs from such natural products. Medicinal plants are widely used in many parts of the world, not only to treat common illnesses but also to treat cancer. This mini-review describes the use of medicinal plants in different parts of the world for the treatment of cancer.

Keywords: alternative drugs; natural products; medicinal plants, anticancer

Introduction

Cancer is one of the most dangerous diseases all over the world; after heart disease, cancer is the main cause of death. Various factors are involved in cancer development, which may include environment, lifestyle, and genetics. It is well established that, despite the increase in technology and modern therapeutic methods, cancer is still a major global challenge. Various novel treatment methods have been developed for cancer treatment and are available in high-income countries. However, these advanced and novel treatment methods are not available in low-income countries. A study conducted in 2020 reported that the availability of radiotherapy machines is very low; in poor countries, it ranges from 0.0–0.4 per million population, while in the developed world, it ranges from 0.1–11.6. According to a recent study, the survival rate of breast cancer patients in poor countries and high-income countries is 25 times different. The study reported that in low-resource countries, breast cancer patients' survival rate is very low (3.5%) as compared to high-income countries, which is about 87%. Due to these differences, people in low-income countries utilize traditional medicines, which are less expensive and also have few or no side effects [1].

Furthermore, chemotherapy and radiotherapy are used for treating cancer, these therapies also have

adverse side effects, which is why patients use different medicinal plants for the treatment of cancer. Herbal experts are using these traditional plants to cure different diseases, including cancer. Throughout the world, the contribution of medicinal plants plays a key role in the pharmaceutical industry [2]. In place of chemotherapy and radiation therapy, a range of medicinal herbs are now used in cancer prevention and treatment. These plants have very rich cancer-preventing and curing capabilities. As compared to other therapeutics, these natural products are nontoxic [3]. This mini-review was conducted to describe the use of medicinal plants in different parts of the world.

The Significance of Medicinal Plants for Cancer Treatment

The main mode of cancer treatment is chemotherapy. Many medications are available to treat cancer, but the majority of these medications have serious side effects. Chemotherapy drugs are becoming resistant to their use. As a result, cancer treatment and prevention continue to be very difficult. On the other hand, medicinal plants contain amazing anticancer compounds that have a lot of applications in the pharmaceutical sector. Researchers are becoming more interested in medicinal plants as a potential cancer cure because of their many benefits and minimal to nonexistent negative effects. Scientific

research is expanding to use these products because they are widely available and less expensive than other therapeutics. The World Health Organization (WHO) supports the use of medicinal plants because they are effective and nontoxic in the treatment of cancer [4].

Common Types of Medicinal Plants Used for Cancer Treatment

There are various treatment strategies for cancer, like chemotherapy, radiotherapy, and other advanced treatment methods. But all these methods have side effects. To overcome this problem, researchers are developing new treatment methods using medicinal plants. Medicinal plants have been used since ancient times all over the world, as these plants have no side effects and can cure cancer because of their natural anticancer potential. Some of these medicinal plants are discussed in this mini-review.

Abelmoschus Moschatus: The ethanolic extracts derived from the seeds and leaves of *Abelmoschus moschatus* have antiproliferative capacity, which can be useful against retinoblastoma and colorectal adenocarcinoma [5].

Adiantum Venustum: *Adiantum venustum* has shown promising effects against cancer. Different compounds, such as flavonoids, terpenoids, saponins, and phytosterols, are derived from the stem and leaves

of *Adiantum venustum*. These natural compounds have anticancer potential and can be used for the treatment of cancer [6].

Aspidosperma Tomentosum: Alkaloids and terpenoids have antiproliferative activity and are obtained from the aerial parts and twigs of *Aspidosperma tomentosum*. These compounds have anticancer potential and can be used against melanoma, lung cancer, breast cancer, and leukemia [7].

Antiaris Africana: The stem of *Antiaris africana* is used to derive natural compounds such as betulinic acid, ursolic acid, strophathidol, and oleanolic acid. All these compounds have been tested for their anticancer properties and have shown promising results as tumor inhibitors [8].

Allium Sativum: Aerial parts and bulbs of *Allium sativum* are used to derive organosulfur compounds that have anticancer potential. These compounds can inhibit cancer cell lines, cause cell cycle arrest, and also have the potential to inhibit lymphocyte proliferation [9].

Arnebia Nobilis: The root of *Arnebia nobilis* is used to obtain beta-dimethyl acryl shikonin, which has anticancer potential and can block cell cycle progression during the G1 phase [10].

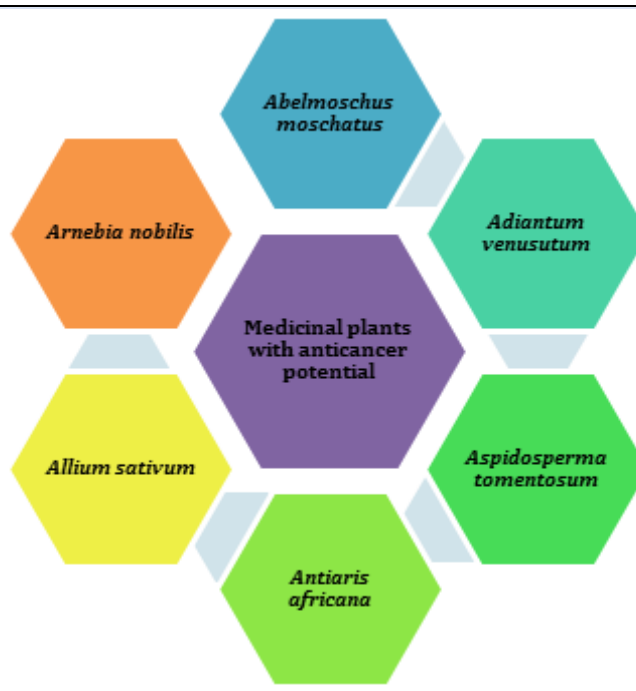


Figure 1: Different medicinal plants with anticancer properties are used for cancer treatment.

Use of Medicinal Plants to Cure Cancer in Different Parts of The World

Throughout history, medicinal plants have stood as venerable allies in the age-old pursuit of treating

diverse ailments across the globe. Despite the advent of various technologically advanced and chemically synthesized drugs for combating diseases, the utilization of herbal plants persists as a prevalent practice in numerous regions. What effect do medicinal plants have in the field of cancer treatment? is the question at hand. The amalgamation of insights from diverse studies offers a nuanced understanding of the varied effects and potential these natural remedies hold in the fight against cancer [11].

The World Health Organization reports that the death rate and incidence of cancer are rising in Asian and African nations. In such developing countries, there is a lack of knowledge, resources, diagnosis, and treatment facilities, which leads to more cases and deaths than in the developed world. A variety of drugs, produced from naturally occurring products, are widely used for cancer treatment. These drugs include lupeol, emodin, furanocoumarins, kaempferol, allicin, colchicine, quercetin, betulinic acid, and rutin [12]. One of the most common cancers in the world today is breast cancer. Many natural products, including benzyl isothiocyanate, oleanolic acid, phenethyl isothiocyanate, and epigallocatechin gallate, are used in the treatment of breast cancer [13]. Furthermore, conventional treatment methods are expensive and also have various side effects. Different countries are working to utilize traditional medicines for cancer treatment. Compared to conventional treatment methods, traditional medicines are less expensive and have very few or no side effects. There are various studies conducted in different parts of the world to evaluate the use of medicinal plants for cancer treatment. In this mini-review, we will provide insight into the use of traditional plants for cancer treatment in different parts of the world.

Use of Medicinal Plants in Asia

The use of traditional Chinese medicine (TCM) is very common in China for the treatment of various diseases. According to various studies, 75% to 80% of patients in China use traditional Chinese medicines for the treatment of cancer. In Chinese hospitals, traditional Chinese medicines are widely used along with conventional cancer therapeutics [14]. Additionally, the Chinese government and industries are investing in studies and research to investigate the role and efficacy of these traditional plants in the field of oncology [15]. A study confirmed the effect of Chinese medicines on increasing the survival rate of colorectal cancer patients with stages II and III [16]. Another study also suggested that acupuncture has

the potential to reduce pain in cancer patients [17]. According to a study conducted in Khyber Pakhtunkhwa (KPK), Pakistan, the majority of inhabitants depend on herbal medication for cancer treatment. The residents of KPK are well aware of such plants in terms of administration and dosage [18]. A variety of studies have been conducted in India to investigate the significance of medicinal plants for the treatment of cancer. These studies have confirmed that 24% to 39% of cancer patients in India use traditional medicines [19]. Despite the use of medicinal plants for cancer treatment in China and other neighboring countries, there are existing challenges that need to be addressed by further research.

Embarking on a comprehensive exploration, a recent review delved into the intricate realm of 114 plant species. This thorough examination honed in on the botanical treasures abundant in Iran, with particular attention given to three predominant plant families: *Fabaceae*, *Asteraceae*, and *Lamiaceae*. Not confining its scope to the Iranian landscape alone, the review expansively encompassed plant species from diverse corners of the globe. The crux of this meticulous analysis was to discern and evaluate the anticancer potential residing within the rich pharmacopeia of medicinal plants prevalent in Iran. The discerning study, orchestrated by Hamed et al. (2022), unequivocally affirmed the substantial efficacy of medicinal plants in combating cancer. This revelation not only reinforces the cultural and scientific significance of traditional herbal practices but also underscores the global relevance of these botanical interventions in the domain of cancer treatment [20]. In a review analysis, 160 Turkish plant taxa were analyzed. In that review, plants were selected from 53 plant families. The study also included 17 formulas for herbal drugs. The majority of plants were selected from the family *Lamiaceae*. Turkish people utilize these plants in the form of infusion, powder, or eaten raw. Different parts of the plants are utilized as therapeutics. Mostly flowers, plant leaves, and fruits are used. However, branches, seeds, roots, and buds are also utilized for cancer treatment [21]. As in other parts of the world, the people of Sri Lanka also utilize medicinal plants for cancer treatment, but according to a review study, the number of plants tested for this purpose is not enough, suggesting that further tests must be conducted on medicinal plants to develop new drugs to fight cancer [22]. However, besides the use of traditional medicines, further research is

required to investigate the safety and efficacy of such medicines.

Use of Medicinal Plants in Africa

In Africa, due to economic issues and a lack of infrastructure, conventional cancer treatment methods are unavailable or only restricted to some urban healthcare centers. Due to the unavailability of infrastructure and the insufficient supply of diagnostic pathology, chemotherapy, radiology, and surgery, conventional cancer treatment is expensive and out of the reach of the majority of the African population. Hence, when a person is diagnosed with cancer, they will prefer the use of traditional medicines because of the availability and affordability of medicinal plants [23-25]. According to a meta-analysis, 40% of cancer patients use herbal medicines, which is the highest percentage of all continents [26]. However, in urban areas, conventional treatment facilities are available, but the use of medicinal plants is still common. The studies conducted in Morocco, Tunisia, and Nigeria also confirmed the use of herbal medicines [27-29].

Within the rich tapestry of Uganda, a diversity of medicinal plants, including *Lovoa trichilioides*, *Cyperus alatus*, *Ficus natalensis*, and *Ficus dawei*, are employed by the local population in the pursuit of treating cancer. While there are claims surrounding the anticancer properties of these plants, it is emphasized that further research is imperative to substantiate these assertions [30-32]. Similarly, Zimbabwe embraces the therapeutic potential of medicinal plants in cancer treatment. A dedicated study in Matabeleland revealed the utilization of 16 distinct plant varieties for addressing cancer-related concerns, underscoring the cultural and botanical wealth contributing to healthcare practices in the region. This attests to the profound connection between local traditions and the exploration of natural resources for health and well-being [33-35].

Use of Medicinal Plants in Latin American Countries

People in Latin American countries also use different traditional medicines for the treatment of cancer [36]. According to an estimate, over 50% to 90% of patients suffering from cancer use traditional medicines [37]. In Chile, Argentina, and Brazil, people also use spiritual practices with natural medicines. These practices may include meditation, massage, yoga, horticultural therapy, and acupuncture. In Latin American countries, the use of

traditional medicines is now being recognized officially due to the widespread use of herbal medicines for cancer treatment [38].

There are two Argentinian healthcare institutions (Foundation to Fight Leukemia and Garrahan Pediatric Hospital) that use traditional medicines for the treatment of cancer. Similarly, in Chile, healthcare facilities such as the National Cancer Institute and the Arturo Copez Perez Foundation provide traditional medicines with conventional therapeutics to cancer patients [39]. In Brazilian medicine centers, medicinal plants are also utilized with conventional cancer drugs. These centers also developed research, clinical care, and teaching programs [40]. Despite the recognition of traditional medicines by Brazilian national policy, conventional healthcare centers are not providing medicinal treatment facilities to cancer patients. It is also necessary for health professionals to inquire with patients about the use of traditional medicines so they will be able to describe the efficacy or side effects of the herb-drug interaction [41].

Although the use of medicinal herbs for the treatment of various diseases is common, more research is still required. In Latin America, a variety of exotic as well as native plants have been studied for their medicinal purposes. These plants belong to different plant families, such as *Lamiaceae*, *Loranthaceae*, and *Annonaceae*. Different medicinal plants, such as *guarana* and *Uncaria tomentosa*, from the Amazon region, have been studied in multiple early-phase clinical trials. These studies have confirmed the efficacy of medicinal plants for the treatment of cancer [42-45]. With the comparatively mild side-effect profiles associated with herbal treatments, it becomes imperative to advocate for a deeper exploration of their mechanisms and applications. By fortifying our understanding of the intricate interplay between medicinal plants and cancer, we can pave the way for more refined and nuanced treatment modalities. This, in turn, may usher in a new era where the deleterious effects often witnessed in conventional treatments are mitigated, contributing to a more comprehensive and patient-centric approach to cancer care [46,47].

Conclusion

The observation that medicinal plants have been successfully used for cancer treatment worldwide is based on the extensive use of herbal plants as an

alternative therapeutic approach for cancer. Notably, these plants exhibit a distinct advantage by mitigating the side effects associated with traditional treatments like chemotherapy and radiotherapy. The nuanced advantage lies in their ability to offer a holistic alternative, notably circumventing the often-taxing side effects associated with conventional treatments such as chemotherapy and radiotherapy. These herbal interventions have been traditionally harnessed in myriad cultural and geographical contexts, showcasing a rich tapestry of knowledge transfer and adaptability. This integrative approach to cancer treatment has demonstrated efficacy across a spectrum of cases, underscoring the potential of medicinal plants to improve the existing arsenal of therapeutic options. It is suggested that further research endeavors be directed toward these plants to enhance the efficacy of cancer treatment while minimizing the adverse effects typically associated with chemotherapy.

Conflict of Interest

The authors have no conflicts of interest related to this publication.

References

1. Mayadev, J. S., Ke, G., Mahantshetty, U., Pereira, M. D., Tarnawski, R., et al. (2022). Global Challenges of Radiotherapy for The Treatment of Locally Advanced Cervical Cancer. *International Journal of Gynecologic Cancer*, 32(3):436-445.
2. Aboufaras, M., Selmaoui, K., Ouzennou, N. (2023). Efficacies and Side Effects of Medicinal Plants Used by Patients with Cancer in Morocco: A Retrospective Treatment-Outcome Study. *Journal of Ethnopharmacology*, 301:115783.
3. Bozyel, M., Merdamert Bozyel, E., Canli, K., Altuner, E. (2019). Anticancer Uses of Medicinal Plants in Turkish Traditional Medicine. *Kahramanmaraş Sütçü İmam Üniversitesi Tarım Ve Doğa Dergisi*, 22:465-484.
4. Chandra, S., Gahlot, M., Choudhary, A. N., Palai, S., De Almeida, et al. (2023). Scientific Evidences of Anticancer Potential of Medicinal Plants. *Food Chemistry Advances*, 2:100239.
5. Mirza, R., Kumar, S., Malik, J. K. (2023). Potential of Hepatoprotective Activity of *Abelmoschus Moschatus* Seed: In-Silico Validation. *Middle East Research Journal of Pharmaceutical Sciences*, 3(2):31-36.
6. Bera, R. K., Dutta, S., Bhadra, P., Debnath, G., Dutta, C., et al. (2023). A Review on Medicinal Plants Uses for Various Types of Cancer. *Journal for Reattach Therapy and Developmental Diversities*, 6(8S):839-850.
7. Pattanayak, S. (2023). Anti-Cancer Plants and Their Therapeutic Use as Succulent Biomedicine Capsules. *Exploratory Animal & Medical Research*, 13:1-50.
8. Thiam, K., Zhao, M., Marchioni, E., Muller, C. D., Diop, Y. M., et al. (2022). Cytotoxic And Pro-Apoptotic Effects of Leaves Extract of *Antiaris Africana* Engler (Moraceae). *Molecules*, 27(22):7723.
9. Rauf, A., Abu-Izneid, T., Thiruvengadam, M., Imran, M., Olatunde, A., et al. (2022). Garlic (*Allium Sativum* L.): Its Chemistry, Nutritional Composition, Toxicity, And Anticancer Properties. *Current Topics in Medicinal Chemistry*, 22(11):957-972.
10. Khan, A., Ali, S., Murad, W., Hayat, K., Siraj, S., et al. A. (2021). Phytochemical And Pharmacological Uses of Medicinal Plants to Treat Cancer: A Case Study from Khyber Pakhtunkhwa, North Pakistan. *Journal of Ethnopharmacology*, 281:114437.
11. Adedokun, K. A., Imodoye, S. O., Bello, I. O., Lanihun, A. A. (2023). Therapeutic Potentials of Medicinal Plants and Significance of Computational Tools in Anti-Cancer Drug Discovery. *Phytochemistry, Computational Tools and Databases in Drug Discovery*, 393-455.
12. Kola, P., Metowogo, K., Manjula, S. N., Katawa, G., Elkhenany, H., et al. (2022). Ethnopharmacological Evaluation of Antioxidant, Anti-Angiogenic, and Anti-Inflammatory Activity of Some Traditional Medicinal Plants Used for Treatment of Cancer in Togo/Africa. *Journal of Ethnopharmacology*, 283:114673.
13. Mlilo, S., Sibanda, S. (2022). An Ethnobotanical Survey of The Medicinal Plants Used in The Treatment of Cancer in Some Parts of Matebeleland, Zimbabwe. *South African Journal of Botany*, 146:401-408.
14. Yadav, N., Deshmukh, R., Majumder, R. (2024). A Comprehensive Review on The Use of Traditional Chinese Medicine for Cancer Treatment. *Pharmacological Research-Modern Chinese Medicine*, 100423.

15. Tian, G., Zhao, C., Zhang, X., Mu, W., Jiang, Y., et al. (2021). Evidence-Based Traditional Chinese Medicine Research: Two Decades of Development, Its Impact, And Breakthrough. *Journal Of Evidence-Based Medicine*, 14(1):65-74.
16. Xu, Y., Wang, X. S., Chen, Y., Shi, Q., Chen, T. H., et al. (2020). A Phase II Randomized Controlled Trial of Renshen Yangrong Tang Herbal Extract Granules for Fatigue Reduction in Cancer Survivors. *Journal Of Pain and Symptom Management*, 59(5):966-973.
17. He, Y., Guo, X., May, B. H., Zhang, A. L., Liu, Y., et al. (2020). Clinical Evidence for Association of Acupuncture and Acupressure with Improved Cancer Pain: A Systematic Review and Meta-Analysis. *JAMA Oncology*, 6(2):271-278.
18. Khan, A., Ali, S., Murad, W., Hayat, K., Siraj, S., et al. (2021). Phytochemical and Pharmacological Uses of Medicinal Plants to Treat Cancer: A Case Study from Khyber Pakhtunkhwa, North Pakistan. *Journal Of Ethnopharmacology*, 281:114437.
19. Lakkoju, B., Asuthkar, S., Rambabu, G., Balakrishna, K. (2024). Phytochemical and Biological Properties of Anticancer Medicinal Plants from India. *Harnessing Medicinal Plants in Cancer Prevention and Treatment*, 165-184.
20. Hamed, A., Bayat, M., Asemani, Y., Amirghofran, Z. (2022). A Review of Potential Anti-Cancer Properties of Some Selected Medicinal Plants Grown in Iran. *Journal of Herbal Medicine*, 33:100557.
21. Kasapoğlu, K. N., Altin, G., Farooqi, A. A., Salehi, B., Setzer, W. N., et al. (2020). Anti-Proliferative, Genotoxic and Cytotoxic Effects of Phytochemicals Isolated from Anatolian Medicinal Plants. *Cellular And Molecular Biology*, 66(4):145-159.
22. Uluwaduge, D. I., Peiris, P. (2023). Review Of Ayurvedic Phytomedicines in Sri Lanka with Analgesic Potential. *International Journal of Ayurveda Research*, 4(3), 164-170.
23. Ly, A. (2018). Traditional Medicines and Cancer Therapies in African Landscape. *J Tumor Med Prev*, 3(1):555601.
24. Ly, A. (2016). Global Health, Cancer Challenges and Control in African Settings. *Canc Therapy & Oncol Int J*. 2(3):555587.
25. Raimi, I. O., Kopaopa, B. G., Mugivhisa, L. L., Lewu, F. B., Amoo, S. O., et al. (2020). An Appraisal of Documented Medicinal Plants Used for The Treatment of Cancer in Africa Over a Twenty-Year Period (1998-2018). *Journal of Herbal Medicine*, 23:100371.
26. Asiimwe, J. B., Nagendrappa, P. B., Atukunda, E. C., Kamatenesi, M. M., Nambozi, G., et al. (2021). Prevalence of the Use of Herbal Medicines Among Patients with Cancer: A Systematic Review and Meta-Analysis. *Evidence-Based Complementary and Alternative Medicine*, 1:9963038.
27. Aliyu, U. M., Awosan, K. J., Oche, M. O., Taiwo, A. O., Jimoh, A. O., et al. (2017). Prevalence and Correlates of Complementary and Alternative Medicine Use Among Cancer Patients in Usmanu Danfodiyo University Teaching Hospital, Sokoto, Nigeria. *Nigerian Journal of Clinical Practice*, 20(12):1576-1583.
28. Labidi, S., Ennouri, S., Rachdi, H., El Benna, H., Mejri, N., et al. (2020). Use Of Complementary and Alternative Medicine in Cancer: A Tunisian Single-Center Experience. *Bulletin Du Cancer*, 107(2):209-214.
29. El Hachlafi, N., Benkhaira, N., Ferioun, M., Kandsi, F., Jeddi, M., et al. (2022). Moroccan Medicinal Plants Used to Treat Cancer: Ethnomedicinal Study and Insights into Pharmacological Evidence. *Evidence-Based Complementary and Alternative Medicine*, 2022(1):1645265.
30. Omara, T., Kiprop, A. K., Ramkat, R. C., Cherutoi, J., Kagoya, S., et al. (2020). Medicinal Plants Used in Traditional Management of Cancer in Uganda: A Review of Ethnobotanical Surveys, Phytochemistry, and Anticancer Studies. *Evidence-Based Complementary and Alternative Medicine*, 1:3529081.
31. Kudamba, A., Kasolo, J. N., Bbosa, G. S., Lugaajju, A., Wabinga, H., et al. (2023). Medicinal Plants Used in The Management of Cancers by Residents in The Elgon Sub-Region, Uganda. *BMC Complementary Medicine and Therapies*, 23(1):450.
32. Asiimwe, J. B., Nagendrappa, P. B., Atukunda, E. C., Kahwa, I., Alonga, L. S. M., et al. (2023). Ethnobotanical Survey of Medicinal Plants Used in The Management of Cancer in Uganda. *Journal of Herbal Medicine*, 42:100808.
33. Kudamba, A., Kasolo, J. N., Bbosa, G. S., Lugaajju, A., Wabinga, H., et al. (2024). Review of Herbal Medicinal Plants Used in The Management of Cancers in The East Africa

- Region From 2019 To 2023. *Integrative Cancer Therapies*, 23:15347354241235583.
34. Mlilo, S., Sibanda, S. (2022). An Ethnobotanical Survey of The Medicinal Plants Used in The Treatment of Cancer in Some Parts of Matebeleland, Zimbabwe. *South African Journal of Botany*, 146:401-408.
 35. Nyagumbo, E., Pote, W., Shopo, B., Nyirenda, T., Chagonda, I., et al. (2022). Medicinal Plants Used for The Management of Respiratory Diseases in Zimbabwe: Review and Perspectives Potential Management Of COVID-19. *Physics And Chemistry of The Earth, Parts A/B/C*, 128:103232.
 36. Matowa, P. R., Gundidza, M., Gwanzura, L., Nhachi, C. F. (2020). A Survey of Ethnomedicinal Plants Used to Treat Cancer by Traditional Medicine Practitioners in Zimbabwe. *BMC Complementary Medicine and Therapies*, 20:1-13.
 37. Lopez, G., Salas, C. A., Cadiz, F., Barriga, C., Gonzalez, P., et al. (2019). Complementary And Integrative Medicine Use in Individuals Seeking Conventional Medical Oncology Care in Chile: Prevalence and Patient Characteristics. *Journal of Global Oncology*, 5:1-6.
 38. Shahrajabian, M. H., Cheng, Q., Sun, W. (2023). The Importance of Neglected and Underutilized Medicinal Plants from South America in Modern Pharmaceutical Sciences. *Letters In Drug Design & Discovery*, 20(11):1688-1706.
 39. Palchetti, M. V., Zamudio, F., Zeballos, S., Davies, A., Barboza, G. E., et al. (2023). Large-Scale Patterns of Useful Native Plants Based on A Systematic Review of Ethnobotanical Studies in Argentina. *Perspectives In Ecology and Conservation*, 21(2):93-100.
 40. Dantas, J. I. M., Nascimento, A. L. B., Silva, T. C., Albuquerque, U. P., De Lima Araújo, E. (2024). Investigating The Dynamics of Cultural Mutations in Local Medicinal Plant Use in NE Brazil. *Ethnobotany Research and Applications*, 28:1-14.
 41. Stubbe, D. E. (2018). Complementary and Alternative Medicine: If You Don't Ask, They Won't Tell. *Focus*, 16(1):60-62.
 42. Palma, C. G. L., Lera, A. T., Lerner, T., De Oliveira, M. M., De Borta, T. M., et al. (2016). Guarana (Paullinia Cupana) Improves Anorexia in Patients with Advanced Cancer. *Journal of Dietary Supplements*, 13(2):221-231.
 43. Suárez, A. I., Chávez, K. (2018). Appraisal of Medicinal Plants with Anticancer Properties in South America. *Anticancer Plants: Properties and Application*, 1:229-283.
 44. Miranda, J. J. M. (2021). Medicinal Plants and Their Traditional Uses in Different Locations. In *Phytomedicine*, 207-223.
 45. Shahrajabian, M. H., Cheng, Q., Sun, W. (2023). The Importance of Neglected and Underutilized Medicinal Plants from South America in Modern Pharmaceutical Sciences. *Letters In Drug Design & Discovery*, 20(11):1688-1706.
 46. Regassa, H., Sourirajan, A., Kumar, V., Pandey, S., Kumar, D., et al. (2022). A Review of Medicinal Plants of The Himalayas with Anti-Proliferative Activity for The Treatment of Various Cancers. *Cancers*, 14(16):3898.
 47. Luo, H., Vong, C. T., Chen, H., Gao, Y., Lyu, P., et al. (2019). Naturally Occurring Anti-Cancer Compounds: Shining from Chinese Herbal Medicine. *Chinese Medicine*, 14(1):48.

Cite this article: Nadia M., Maryam M. (2024). Use of Medicinal Plants for The Treatment of Cancer in Different Parts of The World: An Overview, *International Journal of Biomedical and Clinical Research*, BioRes Scientia Publishers. 1(5):1-7. DOI: 10.59657/2997-6103.brs.24.029

Copyright: © 2024 Maqsood Maryam, this is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Article History: Received: August 26, 2024 | Accepted: October 21, 2024 | Published: October 28, 2024