

1. [Clinical efficacy and safety of Huachansu injection combination with platinum-based chemotherapy for advanced non-small cell lung cancer: A systematic review and meta-analysis of randomized controlled trials](#)

Medicine (Baltimore). 2021 Sep 10;100(36):e27161. doi: 10.1097/MD.00000000000027161.

Authors

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Abstract

Background: Huachansu injection (HCS) is a widely used traditional Chinese medicine for advanced non-small cell lung cancer (NSCLC) to alleviate the adverse drug reactions (ADRs) and enhance the clinical efficacy of chemotherapy.

Objective: To evaluate the efficacy and safety of HCS as an adjunctive treatment to platinum-based chemotherapy (PBC) for advanced NSCLC.

Methods: A systematic review and meta-analysis were conducted according to PRISMA guidelines. A total of nine databases were searched to select randomized controlled trials (RCTs) of HCS plus PBC to treat NSCLC from inception to October 10, 2020. RCTs on HCS plus PBC vs PBC alone for advanced NSCLC were included. Dichotomous data were pooled as risk ratio (RR) with 95% confidence intervals. RCTs compared to HCS plus PBC vs PBC alone were included. Primary outcomes were objective response rate (ORR) and disease control rate (DCR), and secondary outcomes were survival rate, quality of life (QOL), and adverse drug reactions (ADRs). GRADE software was used to assess the quality of evidence.

Results: A total of 32 RCTs, including 2753 patients, were included. Compared to PBC alone, HCS plus PBC improved the ORR, DCR, 1- and 2-year survival rates, and QOL and alleviated neutropenia, thrombocytopenia, nausea, vomiting, anemia, liver injury, renal injury, and alopecia.

Conclusions: Compared to PBC alone, HCS plus PBC improved the clinical efficacy and alleviated the ADRs in advanced NSCLC patients. Considering the limitations of the included RCTs, high-quality trials with longer follow-ups are needed to further confirm the results.

2. [Reflexology and meditative practices for symptom management among people with cancer: Results from a sequential multiple assignment randomized trial](#)

Res Nurs Health. 2021 Oct;44(5):796-810. doi: 10.1002/nur.22169. Epub 2021 Jul 19.

Authors

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Abstract

Optimal sequencing of complementary therapies can help improve symptom management through nonpharmacological approaches. A 12-week sequential multiple assignment randomized trial comparing home-based reflexology and meditative practices on severity of fatigue and other symptoms was conducted among patients with cancer and their informal caregivers. Dyads were initially randomized to reflexology (N = 150), meditative practices (N = 150), or control (N = 47). If patient's fatigue did not improve (nonresponse) after 4 weeks of reflexology or meditative practices, the dyad was rerandomized to either add the other therapy or continue with the original therapy for weeks 5-8. Four decision rules (DRs) were compared: (1) Initiating reflexology, and if nonresponse on fatigue after 4 weeks, continue with reflexology for another 4 weeks, thus providing a higher dose; (2) Initiating reflexology, and if nonresponse on fatigue after 4 weeks, add meditative practices for the next 4 weeks; (3) Initiating meditative practices, and if nonresponse on fatigue after 4 weeks, continue meditative practices for another 4 weeks, thus providing a higher dose; and (4) Initiating meditative practices, and if nonresponse on fatigue after 4 weeks, add reflexology for the next 4 weeks. Symptoms were evaluated weekly using the M.D. Anderson Symptom Inventory (MDASI). Clinically, nurses can recommend either therapy since no differences were found among the 4 DRs, with the exception of lower severity for summed MDASI symptoms at week 8 for the use of reflexology only (DR-1) versus DR-2 (sequencing reflexology to meditative practices). Adding the other therapy for nonresponders after 4 weeks may not be warranted.

3. [Electroacupuncture for postoperative ileus after laparoscopic surgery on colorectal cancer: study protocol for a randomized controlled trial](#)

Trials. 2021 Sep 9;22(1):610. doi: 10.1186/s13063-021-05564-3.

Authors

[Jia-Kai Shao](#)¹, [Qian Liu](#)², [Wei Pei](#)², [Yu Wang](#)¹, [Na-Na Yang](#)¹, [Ling-Yu Qi](#)¹, [Jin Huang](#)¹, [Jing-Wen Yang](#)³, [Cun-Zhi Liu](#)¹

Abstract

Background: Postoperative ileus (POI) occurs in almost all patients after abdominal laparoscopic surgery, resulting in complications and increasing the length of hospitalization. Electroacupuncture has been used as an alternative therapy for gastrointestinal dysfunction, but its efficacy for POI is inconclusive. The study is designed to determine whether electroacupuncture can accelerate recovery from POI.

Methods/design: This study is a three-arm, randomized controlled trial. A total of 105 patients will be randomized into a group receiving electroacupuncture at Tianshu (ST25), a group receiving electroacupuncture at Zusanli (ST36), or a control group in a 1:1:1 ratio. Patients in the electroacupuncture groups will receive electroacupuncture treatment for 4 days from the first day after surgery. The primary outcome consists of the time to first flatus and the time to first defecation. Secondary outcomes include the time to first tolerance of liquid and semiliquid food; the length of the hospital stay; postoperative pain, nausea, and vomiting; abdominal distension; the time to first get out of bed; and postoperative complications. The outcomes will be assessed by the patients themselves every day during hospitalization. Surgeons, nurses, assessors, and statisticians will be blinded to the group assignments. Patients in the two electroacupuncture groups, but not in the control group, will be blinded to the group assignments. The acupuncturists will not be blinded.

Discussion: The aim of this trial is to provide a nonpharmacological therapy for POI and may provide evidence of the effect of electroacupuncture at ST25 or ST36 on POI.

4. [The effect of a supportive program on coping strategies and stress in women diagnosed with breast cancer: A randomized controlled clinical trial](#)

Nurs Open. 2021 May;8(3):1157-1167. doi: 10.1002/nop2.728. Epub 2020 Nov 30.

Authors

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Abstract

Aim: To investigate the effect of a supportive program on coping strategies and stress in women with breast cancer.

Design: A randomized, two-armed, controlled trial.

Methods: Sixty women were randomly allocated to intervention group (N = 30) and control group (N = 30). The interventions were held in six sessions, weekly from August 2018-March 2019 It was consisting of education regarding breast cancer; progressive muscle relaxation; stress management; emotional coping; and problem-solving strategies.

Results: At baseline, there was no difference between the two groups regarding the mean score of coping strategies and stress. Supportive program group participants experienced a significantly higher increase on their problem-oriented coping strategies score in comparison with the control group. At the same time, scores in emotion-oriented coping strategies and stress decreased significantly in the

intervention group compared with the control group. Result of this study can be used to develop relevant interventions targeting coping strategies to reduce stress among women with breast cancer.

5. [Electroacupuncture Attenuates Cancer-Induced Bone Pain via NF-κB/CXCL12 Signaling in Midbrain Periaqueductal Gray](#)

ACS Chem Neurosci. 2021 Sep 15;12(18):3323-3334. doi: 10.1021/acchemneuro.1c00224. Epub 2021 Aug 30.

Authors

[Miao Xu](#)¹, [Yong Fei](#)¹, [Qiuli He](#)¹, [Jie Fu](#)¹, [Jianjun Zhu](#)¹, [Jiachun Tao](#)¹, [Chaobo Ni](#)¹, [Chengfei Xu](#)¹, [Qinghe Zhou](#)¹, [Ming Yao](#)¹, [Huadong Ni](#)¹

Abstract

Electroacupuncture (EA) is effective in various chronic pains. NF-κB and CXCL12 modulate the formation of chronic pain. Herein, we hypothesized that EA alleviates cancer-induced bone pain (CIBP) through NF-κB/CXCL12 axis in midbrain periaqueductal gray (PAG), which participates in "top-down" pain modulatory circuits. In order to filter the optimum EA frequency for CIBP treatment, 2, 100, or 2/100 Hz EA was set up. In addition, ipsilateral, contralateral, and bilateral EA groups were established to affirm the optimal EA scheme. Bilateral 2/100 Hz EA was considered as the optimal therapeutic scheme and was applied in a subsequent experiment. Western blotting along with immunofluorescence illustrated that CIBP induces a rapid and substantial increase in CXCL12 protein level and NF-κB phosphorylation in vIPAG from day 6 to day 12. Anti-CXCL12 neutralizing antibody and pAAV-U6-shRNA(CXCL12)-CMV-EGFP-WPRE in vIPAG remarkably improved the mechanical pain threshold of the hind paw in CIBP model relative to the control. EA inhibited the upregulation of pNF-κB and CXCL12 in vIPAG of CIBP. The recombinant CXCL12 and pAAV-CMV-CXCL12-EF1a-EGFP-3Xflag-WPRE reversed the abirritation of EA in the CIBP rat model. NF-κB phosphorylation mediated-CXCL12 expression contributed to CIBP allodynia, whereas EA suppressed NF-κB phosphorylation in CIBP. According to the above evidence, we conclude that bilateral 2/100 Hz EA is an optimal therapeutic scheme for CIBP. The abirritation mechanism of EA might reduce the expression of CXCL12 by inhibiting the activation of NF-κB, which might lead to the restraint of descending facilitation of CIBP.

6. [The Involvement of Natural Polyphenols in the Chemoprevention of Cervical Cancer](#)

Int J Mol Sci. 2021 Aug 16;22(16):8812. doi: 10.3390/ijms22168812.

Authors

[Georgiana Dretcanu](#)¹, [Cristian I Iuhas](#)², [Zorita Diaconeasa](#)¹

Abstract

From all types of cancer, cervical cancer manages to be in top four most frequent types, with a 6.5% rate of occurrence. The infectious vector that induces the disease, the high-risk Human papillomavirus (HPV), which is a sexually transmitted virus, is capable of transforming the host cell by modulating some of the principal signaling pathways responsible for cell cycle arrest, proliferation, and survival. Fortunately, like other cancer types, cervical cancer can be treated by surgical interventions or chemoradiotherapy, but these methods are not exactly the lucky clover of modern medicine because of the adverse effects they have. That is the reason why in the last years the emphasis has been on alternative medicine, more specifically on phytochemicals, as a substantial number of studies showed that diet contributes to cancer prevention and treatment. All these studies are trying to find new chemopreventive agents with less toxicity but high effectiveness both in vitro and in vivo. The aim of this review is to evaluate the literature in order to underline the advantages and disadvantages of polyphenols, a class of dietary compounds, as chemopreventive and chemotherapeutic agents. This review also aims to present polyphenols from different perspectives, starting with mechanisms of action and ending with their toxicity. The bigger picture illustrates that polyphenols have great potential in cervical cancer prevention, with strong effects on gene modulation.

[Combining the Anticancer and Immunomodulatory Effects of *Astragalus* and Shiitake as an Integrated Therapeutic Approach](#)

7.

Nutrients. 2021 Jul 27;13(8):2564. doi: 10.3390/nu13082564.

Authors

[Biju Balakrishnan](#)^{1 2}, [Qi Liang](#)^{1 3}, [Kevin Fenix](#)^{2 4}, [Bunu Tamang](#)¹, [Ehud Hauben](#)^{2 4 5}, [Linlin Ma](#)⁶, [Wei Zhang](#)¹

Abstract

Astragalus root (Huang Qi) and Shiitake mushrooms (*Lentinus edodes*) are both considered medicinal foods and are frequently used in traditional Chinese medicine due to their anticancer and immunomodulating properties. Here, the scientific literatures describing evidence for the anticancer and immunogenic properties of Shiitake and *Astragalus* were reviewed. Based on our experimental data, the potential to develop medicinal food with combined bioactivities was assessed using Shiitake mushrooms grown over *Astragalus* beds in a proprietary manufacturing process, as a novel cancer prevention approach. Notably, our data suggest that this new manufacturing process can result in transfer and increased bioavailability of *Astragalus* polysaccharides with therapeutic potential into edible Shiitake. Further research efforts are required to validate the therapeutic potential of this new Hengshan *Astragalus* Shiitake medicinal food.

8. [Effects of moxibustion on reproduction and metabolism of polycystic ovary syndrome: a protocol for meta-analysis and systematic review](#)

BMJ Open. 2021 Aug 25;11(8):e049039. doi: 10.1136/bmjopen-2021-049039.

Authors

[Kou Xu](#)¹, [Jiajie Wang](#)², [Feng Hu](#)², [Siyang Lv](#)¹, [Yanji Zhang](#)¹, [Qiqi Yang](#)¹, [Wei Huang](#)², [Zhongyu Zhou](#)^{3 4}

Abstract

Introduction: Polycystic ovary syndrome (PCOS) is one of the most common endocrinopathy in women of reproductive age. Recently, moxibustion, as a complementary and alternative therapy, has been commonly used in assisted reproduction and improvement of metabolic abnormalities in patients with PCOS. Currently, intervention efficacy of the use of moxibustion in PCOS treatment still remains controversial due to lack of high-quality evidence. Consequently, this study protocol was designed to objectively review and evaluate the effectiveness and safety of moxibustion treatment for PCOS.

Methods and analysis: Electronic searches will be carried out from inception to May 2021 in the online databases of The Cochrane Library, PubMed, EMBASE, Chinese Biomedical Literature, Chongqing VIP Chinese Science and Technology Periodical Database (VIP) and China National Knowledge Infrastructure. The Chinese Clinical Trial Registry Center and Clinical Trials will be used for searching ongoing trials. Randomised controlled trials and the first period in randomised cross-over trials involving any type of moxibustion for patients with PCOS will be included. Primary outcomes will be the ovulation rate, pregnancy rate and sex hormone levels, and secondary outcomes will be changes in clinical symptoms and metabolic indicators, total effective rate and the incidences of side effects and adverse events. Briefly, two reviewers will independently conduct study selection and data extraction, and the risk of bias will be assessed. Prior to the formal meta-analysis, the heterogeneity of included studies will be assessed. Review Manager Statistical Software (RevMan) V.5.3 will be used for data processing. Finally, the Grading of Recommendations Assessment, Development and Evaluation method will be applied to evaluate the quality of evidence.

Ethics and dissemination: Ethical approval is not necessary since this study is designed as a systematic review. This study will be disseminated by a peer-review journal or conference presentation.

9. [A New Method for Syndrome Classification of Non-Small-Cell Lung Cancer Based on Data of Tongue and Pulse with Machine Learning](#)

Biomed Res Int. 2021 Aug 11;2021:1337558. doi: 10.1155/2021/1337558. eCollection 2021.

Authors

[Yu-Lin Shi](#)¹, [Jia-Yi Liu](#)¹, [Xiao-Juan Hu](#)², [Li-Ping Tu](#)¹, [Ji Cui](#)¹, [Jun Li](#)¹, [Zi-Juan Bi](#)¹, [Jia-Cai Li](#)¹, [Ling Xu](#)³, [Jia-Tuo Xu](#)¹

Abstract

Objective: To explore the data characteristics of tongue and pulse of non-small-cell lung cancer with Qi deficiency syndrome and Yin deficiency syndrome, establish syndrome classification model based on data of tongue and pulse by using machine learning methods, and evaluate the feasibility of syndrome classification based on data of tongue and pulse.

Methods: We collected tongue and pulse of non-small-cell lung cancer patients with Qi deficiency syndrome ($n = 163$), patients with Yin deficiency syndrome ($n = 174$), and healthy controls ($n = 185$) using intelligent tongue diagnosis analysis instrument and pulse diagnosis analysis instrument, respectively. We described the characteristics and examined the correlation of data of tongue and pulse. Four machine learning methods, namely, random forest, logistic regression, support vector machine, and neural network, were used to establish the classification models based on symptom, tongue and pulse, and symptom and tongue and pulse, respectively.

Results: Significant difference indices of tongue diagnosis between Qi deficiency syndrome and Yin deficiency syndrome were TB-a, TB-S, TB-Cr, TC-a, TC-S, TC-Cr, perAll, and the tongue coating texture indices including TC-CON, TC-ASM, TC-MEAN, and TC-ENT. Significant difference indices of pulse diagnosis were t_4 and t_5 . The classification performance of each model based on different datasets was as follows: tongue and pulse < symptom < symptom and tongue and pulse. The neural network model had a better classification performance for symptom and tongue and pulse datasets, with an area under the ROC curves and accuracy rate which were 0.9401 and 0.8806.

Conclusions: It was feasible to use tongue data and pulse data as one of the objective diagnostic basis in Qi deficiency syndrome and Yin deficiency syndrome of non-small-cell lung cancer.

[Nutrition Strategy and Life Style in Polycystic Ovary Syndrome-Narrative Review](#)

10.

Nutrients. 2021 Jul 18;13(7):2452. doi: 10.3390/nu13072452.

Authors

[Małgorzata Szczuko](#)¹, [Justyna Kikut](#)¹, [Urszula Szczuko](#)¹, [Iwona Szydłowska](#)², [Jolanta Nawrocka-Rutkowska](#)³, [Maciej Ziętek](#)³, [Donatella Verbanac](#)⁴, [Luciano Saso](#)⁵

Abstract

Here we present an extensive narrative review of the broadly understood modifications to the lifestyles of women with polycystic ovary syndrome (PCOS). The PubMed database was analyzed, combining PCOS entries with causes, diseases, diet supplementation, lifestyle, physical activity, and

use of herbs. The metabolic pathways leading to disturbances in lipid, carbohydrate, and hormonal metabolism in targeted patients are described. The article refers to sleep disorders, changes in mental health parameters, and causes of oxidative stress and inflammation. These conditions consistently lead to the occurrence of severe diseases in patients suffering from diabetes, the fatty degeneration of internal organs, infertility, atherosclerosis, cardiovascular diseases, dysbiosis, and cancer. The modification of lifestyles, diet patterns and proper selection of nutrients, pharmacological and natural supplementation in the form of herbs, and physical activity have been proposed. The progress and consequences of PCOS are largely modifiable and depend on the patient's approach, although we have to take into account also the genetic determinants.

11. [Plants Used for the Traditional Management of Cancer in the Eastern Cape Province of South Africa: A Review of Ethnobotanical Surveys, Ethnopharmacological Studies and Active Phytochemicals](#)

Molecules. 2021 Jul 30;26(15):4639. doi: 10.3390/molecules26154639.

Authors

[Idowu Jonas Sagbo](#)¹, [Wilfred Otang-Mbeng](#)¹

Abstract

Cancer occurrence is rapidly increasing all over the world, including in developing countries. The current trend in cancer management requires the use of herbal remedies since the majority of anticancer drugs are known to be costly, with unwanted side effects. In the Eastern Cape province, the use of medicinal plants for cancer management has been climbing steadily over the past two decades due to their cultural belief, low cost, efficacy, and safety claims. With the aim of identifying some potential anticancer plants for probable drug development, this study was undertaken to review plants reported by ethnobotanical surveys in the Eastern Cape province of South Africa for the traditional management of cancer. Information regarding plants used for cancer management in the Eastern Cape province was obtained from multidisciplinary databases and ethnobotanical books. About 24 plant species belonging to twenty families have been reported to be used for the traditional management of cancer in the Eastern Cape province. Among the anticancer plant species, only 16 species have been explored scientifically for their anticancer activities. This review authenticated the use of anticancer plant species in the Eastern Cape province and, therefore, identified several promising unexplored species for further scientific evaluation.

12. [Anticancer mechanisms of phytochemical compounds: focusing on epigenetic targets](#)
Environ Sci Pollut Res Int. 2021 Sep;28(35):47869-47903. doi: 10.1007/s11356-021-15594-8. Epub 2021 Jul 26.

Authors

[Nasreddine El Omari](#)¹, [Mohamed Bakha](#)², [Hamada Imtara](#)³, [Fatima-Ezzahrae Guaouguaoua](#)⁴, [Abdelaali Balahbib](#)⁵, [Gokhan Zengin](#)⁶, [Abdelhakim Bouyahya](#)⁷

Abstract

It has recently been proven that epigenetic dysregulation is importantly involved in cell transformation and therefore induces cancerous diseases. The development of molecules called epidrugs, which target specifically different epigenetic modifications to restore cellular memory and therefore the treatment, became a real challenge currently. Currently, bioactive compounds of medicinal plants as epidrugs have been identified and explored in cancer therapy. Indeed, these molecules can target specifically different epigenetic modulators including DNMT, HDAC, HAT, and HMT. Moreover, some compounds exhibit stochastic epigenetic actions on different pathways regulating cell memory. In this work, pharmacodynamic actions of natural epidrugs belonging to cannabinoids, carotenoids, chalcones, fatty acids, lignans, polysaccharides, saponins, secoiridoids, steroids, tannins, tanshinones, and other chemical classes were reported and highlighted. In this review, the effects of several natural bioactive compounds of epigenetic medications on cancerous diseases were highlighted. Numerous active molecules belonging to different chemical classes such as cannabinoids, carotenoids, fatty acids, lignans, polysaccharides, saponins, secoiridoids, steroids, tannins, and tanshinones are discussed in this review.

13. [Application of network pharmacology and molecular docking to elucidate the potential mechanism of Astragalus-Scorpion against prostate cancer](#)

Andrologia. 2021 Oct;53(9):e14165. doi: 10.1111/and.14165. Epub 2021 Jun 29.

Authors

[Litong Wu](#)^{1 2}, [Ying Chen](#)^{1 2}, [Minjing Chen](#)^{1 2}, [Yueqin Yang](#)^{1 2}, [Zuzhao Che](#)^{1 2}, [Qixin Li](#)¹, [Xujun You](#)¹, [Wei Fu](#)¹

Abstract

The present study aimed to investigate the molecular mechanism of the Astragalus-Scorpion drug pair in the treatment of prostate cancer (PCa). We employed network pharmacology and molecular docking technology to retrieve the active ingredients and corresponding targets of Astragalus-Scorpion by using TCMSP, BATMAN-TCM, TCMID and Swiss Target Prediction Databases. The targets related to PCa were retrieved through GeneCards. Cytoscape software was used to construct the 'active ingredient-target disease' network, and GO and KEGG enrichment analyses were performed on the common targets. Autodock software was used for molecular docking verification. In total, 26 active ingredients, 340 potential targets related to active ingredients and 122 common targets were screened from Astragalus-Scorpion drug pair. The core targets of the protein-protein interaction (PPI) network were JUN, AKT1, IL6, MAPK1 and RELA, whereas the core active ingredients were quercetin, kaempferol, formononetin, 7-o-methylisomucronulatol and calycosin. Nearly 762 GO entries and 154 pathways were obtained by using the pathway enrichment analysis. Molecular docking results

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revealed that quercetin and kaempferol bind to AKT1 and formononetin binds to RELA, all of which were found to be stable bounds.

14. [Acupressure for Cancer-fatigue in Ovarian Cancer Survivor \(AcuOva\) Study: A community-based clinical trial study protocol examining the impact of self-acupressure on persistent cancer-related fatigue in ovarian cancer survivors](#)

Contemp Clin Trials. 2021 Aug;107:106477. doi: 10.1016/j.cct.2021.106477. Epub 2021 Jun 10.

Authors

[Suzanna Maria Zick](#)¹, [Grant Kruger](#)², [Steven Harte](#)³, [Ananda Sen](#)⁴, [Richard Edmund Harris](#)⁵, [Celeste Leigh Pearce](#)⁶

Abstract

Background Persistent cancer-related fatigue is one of the most common and burdensome symptoms experienced by ovarian cancer survivors. Despite the high burden of fatigue in ovarian cancer survivors, there are few available treatments. Previous research has shown self-acupressure to be a safe method for improving persistent fatigue, sleep, and quality of life among fatigued breast cancer survivors, yet there are no studies examining self-acupressure for fatigue in ovarian cancer survivors. Methods A three group parallel, randomized controlled trial will be conducted to evaluate the efficacy of self-acupressure taught and delivered via a patient-designed, custom-built mobile app ("MeTime") and accompanying hand-held device ("AcuWand") to help guide correct pressure application. A sample of 165 ovarian cancer survivors, who have completed primary cancer treatment will be recruited from tumor registries in Michigan and Los Angeles. Participants will be mailed a tablet preloaded with the app and a device, and all visits will be conducted remotely. Participants will be randomized to 6-weeks of daily self-acupressure via the app and device, or a sham app and device, or no care group. Self-report measures will be completed at baseline, 6-weeks (post-intervention), 3-, and 6-months. Primary outcome is the Brief Fatigue Inventory; secondary outcomes are sleep, quality of life, and symptoms commonly associated with persistent fatigue. Discussion An app based self-acupressure treatment may be an easily-accessible and inexpensive treatment to reduce fatigue in ovarian cancer survivors. The results of the study will provide information on the possible benefits of app-based self-acupressure for fatigue in ovarian cancer survivors. Trial registration: This study is registered at ClinicalTrials.gov Identifier: [NCT03763838](#), date registered on December 4, 2018.

15. [Complementary and Alternative Medicine for the Treatment of Gliomas: Scoping Review of Clinical Studies, Patient Outcomes, and Toxicity Profiles](#)

World Neurosurg. 2021 Jul;151:e682-e692. doi: 10.1016/j.wneu.2021.04.096. Epub 2021 Apr 30.

Authors

[Dhiraj J Pangal](#)¹, [Hans Baertsch](#)², [Eliza M Kellman](#)², [Tyler Cardinal](#)², [Andrew Brunswick](#)², [Martin Rutkowski](#)², [Ben Strickland](#)², [Frances Chow](#)², [Frank Attenello](#)², [Gabriel Zada](#)²

Abstract

Introduction: Complementary and alternative medicine (CAM) are highly used among those diagnosed with glioma. Further research is warranted, however, as it remains important to clearly delineate CAM practices that are unproven, disproven, or promising for future research and implementation.

Methods: A systematic review was conducted to identify all articles that investigated the effect of any CAM therapy on survival of patients with newly diagnosed or recurrent glioma.

Results: Eighteen papers and 4 abstracts pertaining to the effects of ketogenic diet (4), antioxidants (3), hyperbaric oxygen (4), cannabinoids (2), carbogen and nicotinamide (3), mistletoe extract (2), hypocupremia and penicillamine (1), and overall CAM use (3) on overall and progression-free survival in patients with low- and high-grade glioma were identified (Levels of Evidence I-IV). Ketogenic diets, hyperbaric oxygen therapy, and cannabinoids appear to be safe and well tolerated by patients; preliminary studies demonstrate tumor response and increased progression-free survival and overall survival when combined with standard of care therapies. Antioxidant usage exhibit mixed results perhaps associated with glioma grade with greater effect on low-grade gliomas; vitamin D intake was associated with prolonged survival. Conversely, carbogen breathing and hypocupremia were found to have no effect on the survival of patients with glioma, with associated significant toxicity. Most modalities under the CAM umbrella have not been appropriately studied and require further investigation.

Conclusions: Despite widespread use, Level I or II evidence for CAM for the treatment of glioma is lacking, representing future research directions to optimally counsel and treat glioma patients.

[Colorectal Cancer, Gut Microbiota and Traditional Chinese Medicine: A Systematic Review](#)

16.

Am J Chin Med. 2021;49(4):805-828. doi: 10.1142/S0192415X21500385. Epub 2021 Apr 6.

Authors

[Hui Zhao](#)^{1 2}, [Man He](#)^{1 2}, [Meng Zhang](#)^{1 2}, [Qiang Sun](#)^{1 2}, [Sha Zeng](#)^{1 2}, [Li Chen](#)^{1 2}, [Han Yang](#)^{1 2}, [Maolun Liu](#)^{1 2}, [Shan Ren](#)^{1 2}, [Xianli Meng](#)^{1 2 3}, [Haibo Xu](#)^{1 2}

Abstract

Based on the study and research on the pathogenesis of colorectal cancer, the types and functions of gut microbiota, and its role in guiding and regulating the occurrence and development of diseases, we

have explored the mechanism of traditional Chinese medicine in the treatment of colorectal cancer by regulating the gut microbiota. Genetic variation, abnormal responses of innate and adaptive immunity, mucosal barrier dysfunction, imbalance of intestinal microbial colonization, personal and environmental risk factors are the main pathogenesis of colorectal cancer. The gut microbiota mainly includes *Sclerotium* (including *Clostridium*, *Enterococcus*, *Lactobacillus* and *Ruminococcus*) and *Bacteroides* (including *Bacteroides* and *Prevotella*), which have biological antagonism, nutrition for the organism, metabolic abilities, immune stimulation, and ability to shape cancer genes functions to body. The gut microbiota can be related to the health of the host. Current studies have shown that Chinese herbal compound, single medicinal materials, and monomer components can treat colorectal cancer by regulating the gut microbiota, such as Xiaoyaosan can increase the abundance of *Bacteroides*, *Lactobacillus*, and *Proteus* and decrease the abundance of *Desulfovibrio* and *Rickerella*. Therefore, studying the regulation and mechanism of gut microbiota on colorectal cancer is of great benefit to disease treatment.

[Use of cucurbitacins for lung cancer research and therapy](#)

17. Cancer Chemother Pharmacol. 2021 Jul;88(1):1-14. doi: 10.1007/s00280-021-04265-7. Epub 2021 Apr 6.

Authors

[Min Liu](#)^{# 1}, [Qijia Yan](#)^{# 2}, [Bi Peng](#)², [Yuan Cai](#)², [Shuangshuang Zeng](#)¹, [Zhijie Xu](#)², [Yuanliang Yan](#)³, [Zhicheng Gong](#)^{4 5}

Abstract

As the main substance in some traditional Chinese medicines, cucurbitacins have been used to treat hepatitis for decades in China. Currently, the use of cucurbitacins against cancer and other diseases has achieved towering popularity among researchers worldwide, as detailed in this review with summarized tables. Numerous studies have reported the potential tumor-killing activities of cucurbitacins in multiple aspects of human malignancies. Continuous research on its anticancer activity mechanisms also brings a glimmer of light to the treatment of patients with lung cancer. In line with the promising roles of cucurbitacins against cancer, through various molecular signaling pathways, it is justifiable to propose the use of cucurbitacins as a potential mainline chemotherapy before the onset and after the diagnosis of lung cancers. Here, this article mainly summarized the findings about the biological functions and underlying mechanisms of cucurbitacins on lung cancer pathogenesis and treatment. In addition, we also discussed the safety and efficacy of their application for further research and even clinical practice.

[Gut Microbiota in Tumor Microenvironment: A Critical Regulator in Cancer Initiation and Development as Potential Targets for Chinese Medicine](#)

18. [Development as Potential Targets for Chinese Medicine](#)

Am J Chin Med. 2021;49(3):609-626. doi: 10.1142/S0192415X21500270. Epub 2021 Mar 4.

Authors

[Li Wang](#)¹, [Fu Peng](#)^{1 2}, [Cheng Peng](#)², [Jun-Rong Du](#)¹

Abstract

Cancer is a disease with a high mortality and disability rate. Cancer consists not only of cancer cells, but also of the surrounding microenvironment and tumor microenvironment (TME) constantly interacting with tumor cells to support tumor development and progression. Over the last decade, accumulating evidence has implicated that microbiota profoundly influences cancer initiation and progression. Most research focuses on gut microbiota, for the gut harbors the largest collection of microorganisms. Gut microbiota includes bacteria, viruses, protozoa, archaea, and fungi in the gastrointestinal tract, affecting DNA damage, host immune response and chronic inflammation in various types of cancer (i.e., colon cancer, gastric cancer and breast cancer). Notably, gut dysbiosis can reshape tumor microenvironment and make it favorable for tumor growth. Recently, accumulating studies have attached the importance of traditional Chinese medicine (TCM) to cancer treatments, and the bioactive natural compounds have been considered as potential drug candidates to suppress cancer initiation and development. Interestingly, more recent studies demonstrate that TCM could potentially prevent and suppress early-stage cancer progression through the regulation of gut microbiota. This review is on the purpose of exhausting the significance of gut microbiota in the tumor microenvironment as potential targets of Chinese medicine.

19. [Quercetin Induces Apoptosis in Glioblastoma Cells by Suppressing Axl/IL-6/STAT3 Signaling Pathway](#)

Am J Chin Med. 2021;49(3):767-784. doi: 10.1142/S0192415X21500361. Epub 2021 Mar 3.

Authors

[Hyo In Kim](#)¹, [Sol Ji Lee](#)², [Yu-Jeong Choi](#)³, [Min Jeong Kim](#)³, [Tai Young Kim](#)², [Seong-Gyu Ko](#)⁴

Abstract

Gliomas are the mostly observed form of primary brain tumor, and glioblastoma multiforme (GBM) shows the highest incidence. The survival rate of GBM is fairly poor; thus, discovery of effective treatment options is required. Among several suggested targets for therapy, the Axl/IL-6/STAT3 signaling pathway has gained recent interest because of its important role within cancer microenvironment. Quercetin, a plant flavonoid, is well known for its anticancer action. However, the effect of quercetin on Axl has never been reported. Quercetin treatment significantly reduced cell viability in two GBM cell lines of U87MG and U373MG while keeping 85% of normal astrocytes alive. Further western blot assays suggested that quercetin induces apoptosis but does not affect Akt or mitogen-activated protein kinases, factors related to cell proliferation. Quercetin also decreased IL-6

release and phosphorylation of STAT3 in GBM cells. In addition, gene expression, protein expression, and half-life of synthesized Axl protein were all suppressed by quercetin. By applying shRNA for knockdown of Axl, we could confirm that the role of Axl was crucial in the apoptotic effect of quercetin on GBM cells. In conclusion, we suggest quercetin as a potential anticancer agent, which may improve cancer microenvironment of GBM via the Axl/IL-6/STAT3 pathway.

20. [20\(S\)-Ginsenoside Rg3 Inhibits Lung Cancer Cell Proliferation by Targeting EGFR-Mediated Ras/Raf/MEK/ERK Pathway](#)

Am J Chin Med. 2021;49(3):753-765. doi: 10.1142/S0192415X2150035X. Epub 2021 Feb 25.

Authors

[Yuan Liang](#)¹, [Tiehua Zhang](#)¹, [Siyuan Jing](#)¹, [Peng Zuo](#)², [Tiezhui Li](#)², [Yongjun Wang](#)², [Shaochen Xing](#)², [Jie Zhang](#)¹, [Zhengyi Wei](#)²

Abstract

Lung cancer is the leading cause of cancer death in the world and classified into non-small cell lung cancer (NSCLC) and small cell lung cancer (SCLC). As tyrosine kinase inhibitors (TKIs), several triterpenoid saponins can target to epidermal growth factor receptor (EGFR), a widely used molecular therapeutic target, to exhibit remarkable anti-proliferative activities in cancer cells. As one of triterpenoid saponins, 20([Formula: see text])-ginsenoside Rg3 [20([Formula: see text])-Rg3] was confirmed to be an EGFR-TKI in this work. According to the quantitative real-time reverse transcription-PCR (qRT-PCR) and immunoblotting analysis, 20([Formula: see text])-Rg3 was certified to play a key role on EGFR/Ras/Raf/MEK/ERK signal pathway regulation. Our data demonstrated that 20([Formula: see text])-Rg3 might block the cell cycle at the G0/G1 phase by downregulating CDK2, Cyclin A2, and Cyclin E1. Molecular docking suggested that the combination of both hydrophobic and hydrogen-bonding interactions may help stabilizing the 20([Formula: see text])-Rg3-EGFR binding. Furthermore, their binding stability was assessed by molecular dynamics simulation. Taken together, these data provide the evidence that 20([Formula: see text])-Rg3 could prohibit A549 cell proliferation, probably by arresting the cell cycle at the G0/G1 phase via the EGFR/Ras/Raf/MEK/ERK pathway.

21. [Art Heals: Randomized Controlled Study Investigating the Effect of a Dedicated In-house Art Gallery on the Recovery of Patients After Major Oncologic Surgery](#)

Ann Surg. 2021 Aug 1;274(2):264-270. doi: 10.1097/SLA.0000000000004059.

Authors

SIO Monthly Digest October 2021

[Zaeem Lone](#)¹, [Ahmed A Hussein](#)¹, [Hijab Khan](#)¹, [Morgan Steele](#)¹, [Zhe Jing](#)¹, [Kristopher Attwood](#)¹, [Joe Lin-Hill](#)², [Russell Davidson](#)², [Khurshid A Guru](#)¹

Abstract

Introduction: We sought to investigate the effect of exposure to a dedicated art gallery during the perioperative period on the recovery of patients undergoing major oncologic procedures.

Methods: Eighty patients were randomized into 2 arms; standard of care versus exposure to art. All patients completed a survey assessing their baseline art knowledge, and 4 poststudy validated questionnaires assessing their pain (Pain Rating Scale), hope (Herth Hope Index), anxiety (State-Trait Anxiety Inventory for Adults), and mental wellbeing (Warwick-Edinburgh Mental Wellbeing Scale). A linear model adjusted for baseline scores was run comparing the scores among the 2 study arms. Stepwise multivariate regression analyses were used to identify predictors of improved pain, hope, anxiety, and wellbeing.

Results: Both groups were comparable in terms of demographics, passion, and knowledge about art. There was no statistically significant difference in pain scores between the 2 groups. The exposure to art group experienced higher hope (2.4 points higher vs 0.05, $P = 0.004$), lower anxiety (8 points lower vs -0.9, $P < 0.0001$), and higher mental well-being scores (5.23 points higher vs -0.05, $P < 0.0001$) in comparison to the standard of care group. On multivariate analyses, exposure to art was significantly associated with improved hope, anxiety, and mental well-being after adjusting for patient and disease characteristics.

Conclusions: Dedicated exposure to art was associated with improved hope, anxiety, and mental well-being of patients after major oncologic surgery.

[The Effectiveness of Yoga on Cancer-Related Fatigue: A Systematic Review and Meta-Analysis](#)

22.

Oncol Nurs Forum. 2021 Mar 1;48(2):207-228. doi: 10.1188/21.ONF.207-228.

Authors

[Jihong Song](#)¹, [Tao Wang](#)², [Yujie Wang](#)³, [Rong Li](#)⁴, [Sitian Niu](#)⁵, [Litao Zhuo](#)⁵, [Qian Guo](#)¹, [Xiaomei Li](#)¹

Abstract

Problem identification: The aim of this article is to evaluate the effectiveness of yoga on cancer-related fatigue (CRF) in patients undergoing chemotherapy and/or radiation therapy.

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Literature search: Relevant English and Chinese articles were retrieved from medical databases and included in this analysis. Standardized critical appraisal instruments from the Joanna Briggs Institute were adopted for the quality assessment.

Data evaluation: 16 randomized controlled trials met the inclusion criteria.

Synthesis: Yoga interventions had a positive effect in reducing CRF among patients undergoing chemotherapy and/or radiation therapy, but the adherence to yoga was low. Mixed types of yoga, in addition to supervised and self-practicing strategies, were associated with increased patient adherence and improved CRF.

Implications for practice: Yoga appears to be a safe and effective exercise for the management of CRF during chemotherapy and/or radiation therapy; however, additional high-quality studies are needed to define an optimal yoga intervention strategy.

[Integrative Oncology Education: An Emerging Competency for Oncology Providers](#)

23.

Curr Oncol. 2021 Feb 10;28(1):853-862. doi: 10.3390/curreoncol28010084.

Authors

[Safiya Karim](#)¹, [Rita Benn](#)², [Linda E Carlson](#)¹, [Judith Fouladbakhsh](#)³, [Heather Greenlee](#)^{4 5 6}, [Rick Harris](#)⁷, [N Lynn Henry](#)⁸, [Shruti Jolly](#)⁹, [Sabrina Mayhew](#)¹⁰, [Lisa Spratke](#)¹¹, [Eleanor M Walker](#)¹², [Bradley Zebrack](#)¹³, [Suzanna M Zick](#)^{2 14}

Abstract

A growing number of cancer patients use complementary and alternative therapies during and after conventional cancer treatment. Patients are often reluctant to discuss these therapies with their oncologist, and oncologists may have limited knowledge and confidence on how to advise patients on the appropriate use. Integrative oncology is a patient-centered, evidence-informed field that utilizes mind-body practices, lifestyle modifications and/or natural products interwoven with conventional cancer treatment. It prioritizes safety and best available evidence to offer appropriate interventions alongside conventional care. There are few opportunities for oncologists to learn about integrative oncology. In this commentary, we highlight the Integrative Oncology Scholars (IOS) program as a means to increase competency in this growing field. We provide an overview of several integrative oncology modalities that are taught through this program, including lifestyle modifications, physical activity, and mind-body interventions. We conclude that as more evidence is generated in this field, it will be essential that oncology healthcare providers are aware of the prevalent use of these modalities by their patients and cancer centers include Integrative Oncology trained physicians and other healthcare professionals in their team to discuss and recommend evidence-based integrative oncology therapies alongside conventional cancer treatments to their patients.

24. [Modelling the determinants of health and cancers as perceived by children: using imagery as a mediator of expression and narration](#)

Arch Dis Child. 2021 Sep;106(9):882-887. doi: 10.1136/archdischild-2020-320601. Epub 2021 Feb 10.

Authors

[Chloé Gay](#)¹, [Maeliane Deyra](#)², [Pauline Berland](#)³, [Laurent Gerbaud](#)³, [Frank Pizon](#)²

Abstract

Objectives: To model and analyse conceptions of determinants of health and cancer that are expressed and perceived by school children aged 6-11 based on a multiphase qualitative protocol.

Methodology: This is a multicentric, qualitative study of human and social sciences conducted among school children aged 6-11 years old. Two different tools were used, e.Photoexpression and Photonarration, in four French schools. This innovative and exploratory method addresses global health during the first phase (e.Photoexpression) and the theme of cancer during the second phase (Photonarration). The children express themselves through photography and narration.

Results: 1498 qualitative productions were made by 381 children aged 6-11 years old. The analysis of these productions of expression and narration through images allowed modelling of determinants of health and cancer as perceived by children through 7 fields and 28 categories. The conceptions of determinants of health and child cancer refer to rationalities that are centred on individual determinants (76%), minimise environmental determinants (20%) and conceal the parameters of access to healthcare and social services (3%).

Discussion: These findings provide new data to the international literature on children's perceptions of determinants of health and cancer. These research findings, which can be applied to interventions and current practices, will enable prevention workers to act more effectively, closer to children's perceptions and needs.

25. [The Anticancer Effect of Natural Plant Alkaloid Isoquinolines](#)

Int J Mol Sci. 2021 Feb 6;22(4):1653. doi: 10.3390/ijms22041653.

Authors

[Dahye Yun](#)^{1 2}, [So Young Yoon](#)^{1 2}, [Soo Jung Park](#)³, [Yoon Jung Park](#)^{1 2}

Abstract

Isoquinoline alkaloids-enriched herbal plants have been used as traditional folk medicine for their anti-inflammatory, antimicrobial, and analgesic effects. They induce cell cycle arrest, apoptosis, and autophagy, leading to cell death. While the molecular mechanisms of these effects are not fully understood, it has been suggested that binding to nucleic acids or proteins, enzyme inhibition, and epigenetic modulation by isoquinoline alkaloids may play a role in the effects. This review discusses recent evidence on the molecular mechanisms by which the isoquinoline alkaloids can be a therapeutic target of cancer treatment.

26. [Grain-sized moxibustion promotes NK cell antitumour immunity by inhibiting adrenergic signalling in non-small cell lung cancer](#)

J Cell Mol Med. 2021 Mar;25(6):2900-2908. doi: 10.1111/jcmm.16320. Epub 2021 Jan 27.

Authors

[Dan Hu](#)^{1 2}, [Weiming Shen](#)^{2 3}, [Chenyuan Gong](#)², [Cheng Fang](#)^{2 3}, [Chao Yao](#)^{2 3}, [Xiaowen Zhu](#)², [Lixin Wang](#)^{2 3}, [Chen Zhao](#)^{1 2}, [Shiguo Zhu](#)^{2 3}

Abstract

Lung cancer is the leading cause of cancer-related death worldwide, and non-small cell lung cancer (NSCLC) accounts for 85% of lung cancer diagnoses. As an ancient therapy, moxibustion has been used to treat cancer-related symptoms in clinical practice. However, its antitumour effect on NSCLC remains largely unexplored. In the present study, a Lewis lung cancer (LLC) xenograft tumour model was established, and grain-sized moxibustion (gMoxi) was performed at the acupoint of Zusanli (ST36). Flow cytometry and RNA sequencing (RNA-Seq) were used to access the immune cell phenotype, cytotoxicity and gene expression. PK136, propranolol and epinephrine were used for natural killer (NK) cell depletion, β -adrenoceptor blockade and activation, respectively. Results showed that gMoxi significantly inhibited LLC tumour growth. Moreover, gMoxi significantly increased the proportion, infiltration and activation of NK cells, whereas it did not affect CD4⁺ and CD8⁺ T cells. NK cell depletion reversed gMoxi-mediated tumour regression. LLC tumour RNA-Seq indicated that these effects might be related to the inhibition of adrenergic signalling. Surely, β -blocker propranolol clearly inhibited LLC tumour growth and promoted NK cells, and gMoxi no longer increased tumour regression and promoted NK cells after propranolol treatment. Epinephrine could inhibit NK cell activity, and gMoxi significantly inhibited tumour growth and promoted NK cells after epinephrine treatment. These results demonstrated that gMoxi could promote NK cell antitumour immunity by inhibiting adrenergic signalling, suggesting that gMoxi could be used as a promising therapeutic regimen for the treatment of NSCLC, and it had a great potential in NK cell-based cancer immunotherapy.

[Study of the active ingredients and mechanism of Sparganii rhizoma in gastric cancer based on](#)

27. [HPLC-Q-TOF-MS/MS and network pharmacology](#)

Sci Rep. 2021 Jan 21;11(1):1905. doi: 10.1038/s41598-021-81485-0.

Authors

[Xiaona Lu](#)^{# 1 2}, [Yawei Zheng](#)^{# 2}, [Fang Wen](#)², [Wenjie Huang](#)², [Xiaoxue Chen](#)², [Shuai Ruan](#)², [Suping Gu](#)², [Yue Hu](#)^{1 2}, [Yuhao Teng](#)^{1 2}, [Peng Shu](#)^{3 4}

Abstract

Sparganii rhizoma (SL) has potential therapeutic effects on gastric cancer (GC), but its main active ingredients and possible anticancer mechanism are still unclear. In this study, we used HPLC-Q-TOF-MS/MS to comprehensively analyse the chemical components of the aqueous extract of SL. On this basis, a network pharmacology method incorporating target prediction, gene function annotation, and molecular docking was performed to analyse the identified compounds, thereby determining the main active ingredients and hub genes of SL in the treatment of GC. Finally, the mRNA and protein expression levels of the hub genes of GC patients were further analysed by the Oncomine, GEPIA, and HPA databases. A total of 41 compounds were identified from the aqueous extract of SL. Through network analysis, we identified seven main active ingredients and ten hub genes: acacetin, sanleng acid, ferulic acid, methyl 3,6-dihydroxy-2-[(2-hydroxyphenyl) ethynyl]benzoate, caffeic acid, adenine nucleoside, azelaic acid and PIK3R1, PIK3CA, SRC, MAPK1, AKT1, HSP90AA1, HRAS, STAT3, FYN, and RHOA. The results indicated that SL might play a role in GC treatment by controlling the PI3K-Akt and other signalling pathways to regulate biological processes such as proliferation, apoptosis, migration, and angiogenesis in tumour cells. In conclusion, this study used HPLC-Q-TOF-MS/MS combined with a network pharmacology approach to provide an essential reference for identifying the chemical components of SL and its mechanism of action in the treatment of GC.

[The effective natural compounds for inhibiting Cervical cancer](#)

28.

Med Oncol. 2021 Jan 20;38(2):12. doi: 10.1007/s12032-021-01456-3.

Author

[Faik Gökalp](#)¹

Abstract

The secondary compounds found in plants are of great importance in the treatment of many diseases in medicine and pharmacy. Some of these compounds have been reported to exhibit anticarcinogenic effects by inhibiting the growth and metastatic potential of cancer cells. Consumption of the required amount of vegetables and fruits appears to have a protective effect of these secondary compounds on cancer, since most of these drugs are synthesized from natural or natural origin compounds. Secondary compounds in medicinal plants have been found to have an antiproliferative effect by

increasing the expression of p53 in cervical cancer cells and decreasing the expression of cyclin D1, one of the cell proliferation markers. The most important step in the fight against cancer is the development of drugs that are selectively targeted against tumor cells and targeting cancer cells to reduce damage to normal cells and prevent the growth and spread of cancer cells. Molecular insertion test is an effective tool for evaluating the bioactivity of possible molecules. In this study, the effect of natural compounds in some medicinal plants in inhibiting cervical cancer, the points where they are effective using docking has been investigated.

29. [Feasibility and potential benefits of partner-supported yoga on psychosocial and physical function among lung cancer patients](#)

Psychooncology. 2021 May;30(5):789-793. doi: 10.1002/pon.5628. Epub 2021 Feb 4.

Authors

[Donald R Sullivan](#)^{1 2 3}, [Mary E Medysky](#)⁴, [Anna L Tyzik](#)¹, [Nathan F Dieckmann](#)⁴, [Quin E Denfeld](#)⁴, [Kerri Winters-Stone](#)^{3 4}

Abstract

Objective: Patients with lung cancer experience significant declines in psychosocial and physical function during and after treatment that impact quality of life (QOL) and survival. Yoga is a potential strategy to mitigate functional decline among patients with lung cancer.

Methods: A single group 12-week pilot trial of low-moderate intensity yoga among patients with stage I-IV lung cancer and their partners (n = 46; 23 patient-partner dyads) during cancer treatment from two hospital systems. Feasibility, acceptability, descriptive statistics, and Cohen d effect sizes were calculated at 6 and 12-weeks for psychosocial and physical outcomes using validated questionnaires and assessments.

Results: At 6 and 12-weeks, retention was 65% and withdrawals were mainly due to disease progression. Among study completers (n = 26; 13 dyads) adherence was 80%. Comparing baseline to 12-week measurements, fatigue, depression symptoms, and sleep disturbance improved in 54% of participants for all three measures (Cohen's d = 0.40-0.53). QOL improved in 77% of participants (Cohen's d = 0.34). Upper and lower body flexibility, and lower body strength improved in 92%, 85% and 77% of participants, respectively (Cohen's d = 0.39-1.08). Six-minute walk test improved in 62% of participants an average of 32 meters (SD = 11.3; Cohen's d = 0.17). No serious adverse events were reported.

Conclusions: Among patients with stage I-IV lung cancer including active treatment, a 12-week partner-supported yoga program is feasible, acceptable, and improved psychosocial and physical function. Low-intensity yoga may be a complimentary approach to reduce the effects of cancer

treatment, however, more research is needed to determine the efficacy of partner-supported yoga to mitigate functional decline.

[Current Progress of Phytomedicine in Glioblastoma Therapy](#)

30.

Curr Med Sci. 2020 Dec;40(6):1067-1074. doi: 10.1007/s11596-020-2288-8. Epub 2021 Jan 11.

Authors

[Fahad Hassan Shah](#)¹, [Saad Salman](#)², [Jawaria Idrees](#)³, [Fariha Idrees](#)³, [Syed Turab Ali Shah](#)⁴, [Abid Ali Khan](#)⁴, [Bashir Ahmad](#)⁴

Abstract

Glioblastoma multiforme, an intrusive brain cancer, has the lowest survival rate of all brain cancers. The chemotherapy utilized to prevent their proliferation and propagation is limited due to modulation of complex cancer signalling pathways. These complex pathways provide infiltrative and drug evading properties leading to the development of chemotherapy resistance. Therefore, the development and discovery of such interventions or therapies that can bypass all these resistive barriers to ameliorate glioma prognosis and survival is of profound importance. Medicinal plants are comprised of an exorbitant range of phytochemicals that have the broad-spectrum capability to target intrusive brain cancers, modulate anti-cancer pathways and immunological responses to facilitate their eradication, and induce apoptosis. These phytocompounds also interfere with several oncogenic proteins that promote cancer invasiveness and metastasis, chemotherapy resistance and angiogenesis. These plants are extremely vital for promising anti-glioma therapy to avert glioma proliferation and recurrence. In this review, we acquired recent literature on medicinal plants whose extracts/bioactive ingredients are newly exploited in glioma therapeutics, and also highlighted their mode of action and pharmacological profile.

[Construction of homologous cancer cell membrane camouflage in a nano-drug delivery system for the treatment of lymphoma](#)

31.

J Nanobiotechnology. 2021 Jan 6;19(1):8. doi: 10.1186/s12951-020-00738-8.

Authors

[Qiangqiang Zhao](#)^{1 2}, [Xiaoying Sun](#)^{3 4}, [Bin Wu](#)⁵, [Yinghui Shang](#)¹, [Xueyuan Huang](#)¹, [Hang Dong](#)¹, [Haiting Liu](#)¹, [Wansong Chen](#)⁶, [Rong Gui](#)⁷, [Jian Li](#)⁸

Abstract

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Background: Non-Hodgkin's lymphoma (NHL) possesses great heterogeneity in cytogenetics, immunophenotype and clinical features, and chemotherapy currently serves as the main treatment modality. Although employing monoclonal antibody targeted drugs has significantly improved its overall efficacy, various patients continue to suffer from drug resistance or recurrence. Chinese medicine has long been used in the treatment of malignant tumors. Therefore, we constructed a low pH value sensitivity drug delivery system based on the cancer cell membrane modified mesoporous silica nanoparticles loaded with traditional Chinese medicine, which can reduce systemic toxicity and improve the therapeutic effect for the targeted drug delivery of tumor cells.

Results: Accordingly, this study put forward the construction of a nano-platform based on mesoporous silica nanoparticles (MSNs) loaded with the traditional Chinese medicine isoimperatorin (ISOIM), which was camouflaged by the cancer cell membrane (CCM) called CCM@MSNs-ISOIM. The proposed nano-platform has characteristics of immune escape, anti-phagocytosis, high drug loading rate, low pH value sensitivity, good biocompatibility and active targeting of the tumor site, blocking the lymphoma cell cycle and promoting mitochondrial-mediated apoptosis.

Conclusions: Furthermore, this study provides a theoretical basis in finding novel clinical treatments for lymphoma.

[Predictive lifestyle markers for efficacy of cancer immune checkpoint inhibitors: a commentary](#)

32.

Future Oncol. 2021 Feb;17(4):363-369. doi: 10.2217/fo-2020-0730. Epub 2021 Jan 5.

Authors

[Arthur Sillah](#)^{1 2}, [Scott S Tykodi](#)^{3 4 5}, [Evan T Hall](#)^{3 4 5}, [John A Thompson](#)^{3 4 5}, [Nathaniel F Watson](#)⁶, [Sylvia M Lee](#)^{3 4 5}, [Shailender Bhatia](#)^{3 4 5}, [Joshua Veatch](#)^{3 4 5}, [Jeannie Warner](#)⁴, [Ulrike Peters](#)^{1 2}, [Rachel C Malen](#)², [Allison Silverman](#)², [Amanda I Phipps](#)^{1 2}

Abstract

Lifestyle factors could plausibly modulate the host immune system, the tumor microenvironment and, hence, immune checkpoint inhibitor (ICI) response. As such, these factors should be considered in ICI studies.

[Colorectal Cancer Biology, Diagnosis, and Therapeutic Approaches](#)

33.

Crit Rev Oncog. 2020;25(2):71-94. doi: 10.1615/CritRevOncog.2020035067.

Authors

[Begum Dariya](#)¹, [Sheik Aliya](#)², [Neha Merchant](#)¹, [Afroz Alam](#)¹, [Ganji Purnachandra Nagaraju](#)³

Abstract

Colorectal cancer (CRC) is the second most diagnosed disease worldwide. It is the fourth leading cause of cancer related mortalities. Higher probability for the occurrence of CRC is due to western lifestyle, age, and personal history of chronic diseases. The development of CRC is a multistep process that includes a sequence of genetic, histological, and morphological alterations that accumulate over time. Furthermore, depending on the origin of mutations, CRC can be classified as familial, sporadic, and inherited, based on which a therapeutic plan is created for a CRC patient. These mutations cause chromosomal alterations and translocations in genes that lead to microsatellite instability (MSI), CpG island methylator phenotype (CIMP), and chromosomal instability (CIN). The mutations affect dysregulation of various pathways that are responsible for cancer progression. They include the PI3K/Akt, Wnt, TP53, and MAPK pathways. Mutated genes, such as KRAS, PTEN, SMAD4, BRAF, and PTEN, are employed as predictive biomarkers for early diagnosis. The conventional therapies of CRC start with surgical resection followed by adjuvant therapies, such as radiotherapy and chemotherapy. Researchers are now developing therapies that combine triplet drugs to overcome the hurdle of multidrug resistance (MDR). The combination of chemotherapy with immunotherapy to target the dysregulated proteins, such as EGFR and VEGFR is found efficient for advanced mCRC therapy. Researchers are now developing personalized medicines by detecting and validating key biomarkers to understand the mechanism of MDR and toxicity. In this review, we address genetic alterations, current data on biomarkers, and novel therapeutic approaches for the treatment of CRC.

34. [The Cytotoxic, Apoptotic Induction, and Cell Cycle Arrest Activities of Solanum nigrum L. Ethanolic Extract on MCF-7 Human Breast Cancer Cell](#)

Asian Pac J Cancer Prev. 2020 Dec 1;21(12):3735-3741. doi: 10.31557/APJCP.2020.21.12.3735.

Authors

[Churiyah Churiyah](#)¹, [Sri Ningsih](#)¹, [Firdayani Firdayani](#)¹

Abstract

Objective: The purpose of this research was to evaluate the cytotoxic, cell cycle arrest, and apoptotic induction activities of the fruit of *S. nigrum* L. ethanolic-70% extract against MCF-7 human breast cancer cell.

Methods: *S. nigrum* L. ripe fruit was blended and macerated with ethanol 70% and the filtrate was evaporated. The semisolid extract was then analyzed phytochemically. Cytotoxic analysis was performed using MCF-7 cancer and Vero normal cell by MTT method and followed by apoptotic and cell cycle arrest analysis using flow cytometry.

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Results: The phytochemical analysis resulted that extract contained total phenolic and flavonoid compounds with the level of $1.545 \pm 0.080\%$ and $0.212 \pm 0.002\%$, respectively. Glycitin was the highest level of isoflavone compound, namely, 375.0844 mg/100 g extract. The cytotoxic evaluation revealed that the extract exhibited a selectively toxic effect between cancer and normal cell. The extract inhibited MCF-7 proliferation with IC50 value about $40.77 \pm 4.86 \mu\text{g/mL}$ and conversely toward Vero cell at lower cytotoxic activity with an IC50 value of $298.96 \pm 27.28 \mu\text{g/mL}$. Evaluation of MCF-7 cell cycles demonstrated that the extract arrested the cell cycle in the S phase and continued to the G2/M phase at the half of the IC50 value. The extract induced apoptotic of MCF-7 cell about 43.31% in which this activity was nearly the same with doxorubicin as a positive control (59.14%). However, solamargine was predicted as the most active anticancer compounds by a molecular docking study so that it was suggested to measure the level of this compound.

Conclusion: It can be concluded that the fruit of *S. nigrum* L. ethanolic-70% extract demonstrated cytotoxic activity toward MCF-7 breast cancer cell and nontoxic on Vero normal cell. Solamargine was predicted as the most active anticancer compound. This extract had an opportunity to be developed as a potential anticancer agent to overcome breast cancer diseases.

[Exercise Benefits Meet Cancer Immunosurveillance: Implications for Immunotherapy](#)

35.

Trends Cancer. 2021 Feb;7(2):91-93. doi: 10.1016/j.trecan.2020.12.003. Epub 2021 Jan 6.

Authors

[Carmen Fiuza-Luces](#)¹, [Pedro L Valenzuela](#)², [Adrián Castillo-García](#)³, [Alejandro Lucia](#)⁴

Abstract

Regular exercise reduces the risk of cancer. One potential mechanism for this efficacy is improved antitumor immunity. This is an important issue because evading immune destruction is a hallmark of cancer and immunotherapy is reshaping cancer treatment. Here we review recent developments reported by Wennerberg et al., Garritson et al., Martín-Ruiz et al., and Rundqvist et al. on the effects of exercise on anticancer immune cell effectors.

[Pain and Spirituality Outcomes Among Women With Advanced Breast Cancer Participating in a Foot Reflexology Trial](#)

36.

Oncol Nurs Forum. 2021 Jan 4;48(1):31-43. doi: 10.1188/21.ONF.31-43.

Authors

[Megan Miller](#)¹, [Ding Xu](#)², [Rebecca Lehto](#)¹, [Jason Moser](#)¹, [Horng-Shiuann Wu](#)¹, [Gwen Wyatt](#)¹

Abstract

Objectives: To examine pain and spirituality, demographic and clinical factors associated with pain and spirituality, the contribution of spirituality to experiences of pain over time, and how pain and spirituality relate to engagement with a caregiver-delivered intervention.

Sample & setting: Women with advanced breast cancer (N = 256) enrolled in a home-based randomized controlled trial of foot reflexology.

Methods & variables: Secondary analyses were conducted with baseline and postintervention data. Stepwise model building, linear mixed-effects modeling, and negative binomial regression were used.

Results: Participants who were younger, not married or partnered, not employed, or receiving hormonal therapy had increased odds of higher pain levels. Those who were older, non-White, or Christian had increased odds of higher spirituality. Spirituality's contribution to pain was not significant over time.

Implications for nursing: Women in this sample experienced moderate pain, on average, at baseline. Women with specific demographic and clinical characteristics may require additional support with pain management and spiritual care.

37. [Selective cytotoxic and anti-metastatic activity in DU-145 prostate cancer cells induced by Annona muricata L. bark extract and phytochemical, annonacin](#)

BMC Complement Med Ther. 2020 Dec 10;20(1):375. doi: 10.1186/s12906-020-03130-z.

Authors

[Kimberley Foster](#)^{1 2}, [Omolola Oyenih](#)³, [Sunelle Rademan](#)³, [Joseph Erhabor](#)³, [Motlalepula Matsabisa](#)³, [James Barker](#)⁴, [Moses K Langat](#)⁵, [Amy Kendal-Smith](#)^{5 6}, [Helen Asemota](#)², [Rupika Delgoda](#)⁷

Abstract

Background: *Annona muricata* L. was identified as a popular medicinal plant in treatment regimens among cancer patients in Jamaica by a previously conducted structured questionnaire. Ethnomedicinally used plant parts, were examined in this study against human prostate cancer cells for the first time and mechanisms of action elucidated for the most potent of them, along with the active phytochemical, annonacin.

Methods: Nine extracts of varying polarity from the leaves and bark of *A. muricata* were assessed initially for cytotoxicity using the MTT (3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide)

assay on PC-3 prostate cancer cells and the ethyl acetate bark (EAB) extract was identified as the most potent. EAB extract was then standardized for annonacin content using High-performance Liquid Chromatography - Mass Spectrometry (HPLC-MS) and shown to be effective against a second prostate cancer cell line (DU-145) also. The mode of cell death in DU-145 cells were assessed via several apoptotic assays including induction of increased reactive oxygen species (ROS) production, reduction of mitochondrial membrane potential, activation of caspases and annexin V externalization combined with morphological observations using confocal microscopy. In addition, the potential to prevent metastasis was examined via inhibition of cell migration, vascular endothelial growth factor (VEGF) and angiogenesis using the chorioallantoic membrane assay (CAM).

Results: Annonacin and EAB extract displayed selective and potent cytotoxicity against the DU-145 prostate carcinoma cells with IC_{50} values of $0.1 \pm 0.07 \mu\text{M}$ and $55.501 \pm 0.55 \mu\text{g/mL}$ respectively, without impacting RWPE-1 normal prostate cells, in stark contrast to chemotherapeutic docetaxel which lacked such selectivity. Docetaxel's impact on the cancerous DU-145 was improved by 50% when used in combination with EAB extract. Insignificant levels of intracellular ROS content, depolarization of mitochondrial membrane, Caspase 3/7 activation, annexin V content, along with stained morphological evaluations, pointed to a non-apoptotic mode of cell death. The extract at $50 \mu\text{g/mL}$ deterred cell migration in the wound-healing assay, while inhibition of angiogenesis was displayed in the CAM and VEGF inhibition assays for both EAB ($100 \mu\text{g/mL}$) and annonacin ($0.5 \mu\text{M}$).

Conclusions: Taken together, the standardized EAB extract and annonacin appear to induce selective and potent cell death via a necrotic pathway in DU-145 cells, while also preventing cell migration and angiogenesis, which warrant further examinations for mechanistic insights and validity in-vivo.

[Pathways Related to the Anti-Cancer Effects of Metabolites Derived from Cerrado Biome Native](#)

38. [Plants: An Update and Bioinformatics Analysis on Oral Squamous Cell Carcinoma](#)

Protein Pept Lett. 2021;28(7):735-749. doi: 10.2174/0929866527999201209221012.

Authors

[Guilherme Machado Xavier](#)¹, [André Luiz Sena Guimarães](#)², [Carlos Alberto de Carvalho Fraga](#)², [Talita Antunes Guimarães](#)², [Marcela Gonçalves de Souza](#)², [Kimberly Marie Jones](#)³, [Lucyana Conceição Farias](#)²

Abstract

Background: Oral cancer is a significant health problem worldwide. Oral squamous cell carcinoma (OSCC) is a malignant neoplasm of epithelial cells that mostly affects different anatomical sites in the head and neck and derives from the squamous epithelium or displays similar morphological characteristics. Generally, OSCC is often the end stage of several changes in the stratified squamous epithelium, which begin as epithelial dysplasia and progress by breaking the basement membrane

and invading adjacent tissues. Several plant-based drugs with potent anti-cancer effects are considered inexpensive treatments with limited side effects for cancer and other diseases.

Objective: The aim of this review is to explore whether some Brazilian plant extracts or constituents exhibit anti-tumorigenic activity or have a cytotoxic effect on human oral carcinoma cells.

Methods: Briefly, OSCC and several metabolites derived from Brazilian plants (i.e., flavonoids, vinblastine, irinotecan, etoposide and paclitaxel) were used as keywords to search the literature on PubMed, GenBank and GeneCards.

Results: The results showed that these five chemical compounds found in Cerrado Biome plants exhibit anti-neoplastic effects. Evaluating the compounds revealed that they play a main role in the regulation of cell proliferation.

Conclusion: Preserving and utilising the biodiversity of our planet, especially in unique ecosystems, such as the Cerrado Biome, may prove essential to preserving and promoting human health in modern contexts.

39. [Anti-Proliferative and Pro-Apoptotic Effects of *Calligonum comosum* \(L'Her.\) Methanolic Extract in Human Triple-Negative MDA-MB-231 Breast Cancer Cells](#)

J Evid Based Integr Med. Jan-Dec 2020;25:2515690X20978391. doi: 10.1177/2515690X20978391.

Authors

[Zeyad Alehaideb](#)^{1 2}, [Saleh AlGhamdi](#)^{2 3}, [Wesam Bin Yahya](#)^{1 2}, [Hamad Al-Eidi](#)^{1 2}, [Mashael Alharbi](#)^{1 2}, [Monira Alaujan](#)^{1 2}, [Abeer Albaz](#)^{1 2}, [Muruj Tukruni](#)^{1 2}, [Atef Nehdi](#)^{2 4}, [Maha-Hamadien Abdulla](#)⁵, [Sabine Matou-Nasri](#)^{1 2}

Abstract

Triple-negative breast cancer (TNBC), the most aggressive subtype, does not respond to targeted therapy due to the lack of hormone receptors. There is an urgent need for alternative therapies, including natural product-based anti-cancer drugs, at lower cost. We investigated the impact of a *Calligonum comosum* L'Hér. methanolic extract (CcME) on the TNBC MDA-MB-231 cell line proliferation and related cell death mechanisms performing cell viability and cytotoxicity assays, flow cytometry to detect apoptosis and cell cycle analysis. The apoptosis-related protein array and cellular reactive oxygen species (ROS) assay were also carried out. We showed that the CcME inhibited the TNBC cell viability, in a dose-dependent manner, with low cytotoxic effects. The CcME-treated TNBC cells underwent apoptosis, associated with a concomitant increase of apoptosis-related protein expression, including cytochrome c, cleaved caspase-3, cyclin-dependent kinase inhibitor p21, and the anti-oxidant enzyme catalase, compared with the untreated cells. The CcME also enhanced the mitochondrial transition pore opening activity and induced G₀/G₁ cell growth arrest, which confirmed the cytochrome c release and the increase of the p21 expression detected in the CcME-treated TNBC

cells. The CcME-treated TNBC cells resulted in intracellular ROS production, which, when blocked with a ROS scavenger, did not reduce the CcME-induced apoptosis. In conclusion, CcME exerts anti-proliferative effects against TNBC cells through the induction of apoptosis and cell growth arrest. *In vivo* studies are justified to verify the CcME anti-proliferative activities and to investigate any potential anti-metastatic activities of CcME against TNBC development and progression.

[Acupuncture treatment for recurrent laryngeal nerve paralysis after thyroid surgery: a case report](#)

40.

Acupunct Med. 2021 Aug;39(4):389-390. doi: 10.1177/0964528420958715. Epub 2020 Nov 30.

Authors

[Weiqi Feng](#)¹, [Min Ding](#)¹, [Sixiu Ren](#)¹, [Jun Zhang](#)¹, [Hua Feng](#)¹

No abstract available

[The Correlation Between Fluid Distribution and Swelling or Subjective Symptoms of the Trunk in Lymphedema Patients: A Preliminary Observational Study](#)

41.

Lymphat Res Biol. 2021 Jun;19(3):269-273. doi: 10.1089/lrb.2020.0075. Epub 2020 Nov 13.

Authors

[Fumiya Hisano](#)¹, [Shiori Niwa](#)¹, [Keisuke Nakanishi](#)¹, [Ayana Mawaki](#)¹, [Kaoru Murota](#)¹, [Atsushi Fukuyama](#)², [Yukari Takeno](#)¹, [Sachiyo Watanabe](#)¹, [Etsuko Fujimoto](#)³, [Chika Oshima](#)¹

Abstract

Background: Manual lymph drainage (MLD) is one of the common treatments for breast cancer-related lymphedema (BCRL). Although the primary goal of MLD is to drain the excessive fluid accumulated in the affected upper limb and trunk to an area of the body that drains usually, the use of MLD is decided based on swelling and subjective symptoms, without assessing whether there is fluid accumulated in the affected region. The purpose of this study was to examine truncal fluid distribution in a sample of BCRL patients and investigate any correlation between such fluid distribution and swelling or subjective symptoms. **Methods and Results:** An observational study was conducted with 13 women who had unilateral, upper extremity BCRL. Fluid distribution was evaluated by using two magnetic resonance imaging (MRI) sequences: half-Fourier acquisition single-shot turbo spin echo and three-dimensional double-echo steady-state. The presence of swelling was determined by lymphedema therapists, and subjective symptoms were measured by using a visual analog scale. On MRI, no participants had any free water signals in the trunk. However, seven had swelling and all 13 had some kind of subjective symptoms on the affected side of their trunk. **Conclusions:** These results suggest that swelling and subjective symptoms do not correlate with the presence of truncal fluid. For such cases, a different approach than MLD may be needed to address truncal swelling and

related subjective symptoms. Checking for the presence of fluid in the truncal region may help MLD be used more appropriately.

42. [Manual Lymphatic Drainage May Not Have an Additional Effect on the Intensive Phase of Breast Cancer-Related Lymphedema: A Randomized Controlled Trial](#)

Lymphat Res Biol. 2021 Apr;19(2):141-150. doi: 10.1089/lrb.2020.0049. Epub 2020 Oct 15.

Authors

[Ekin Ilke Sen](#)¹, [Sina Arman](#)¹, [Mert Zure](#)¹, [Hadi Yavuz](#)¹, [Dilsad Sindel](#)¹, [Aydan Oral](#)¹

Abstract

Background: Breast cancer-related lymphedema (BCRL) is a potentially debilitating complication of breast cancer and its treatment. The aim of this study was to determine the efficacy of manual lymphatic drainage (MLD) added to multilayer compressive bandage treatment in addition to an exercise program, on arm volume, subjective symptoms, upper limb functions, and health-related quality of life (HRQoL) in patients with BCRL. **Methods:** This prospective, randomized, single-blind interventional trial involved 54 patients with BCRL. Eligible patients were randomly allocated to a complex decongestive therapy (CDT) group ($n = 27$) and a standard therapy (ST) group ($n = 27$). Both groups participated in a 15-session program (every weekday for 3 weeks) that included compressive multilayer bandaging and exercise training. The patients who were allocated to the CDT group received MLD before bandaging in addition to the ST. Bilateral arm circumferences were measured using a measuring tape at six reference points. Subjective symptoms, such as discomfort, heaviness, and swelling severity were measured using a visual analog scale (VAS). Upper limb functions and HRQoL were assessed using the Quick Disabilities of the Arm, Shoulder and Hand (Quick-DASH) and Lymphedema Functioning, Disability, and Health Questionnaire (Lymph-ICF), respectively. **Results:** The excess arm volume, percent change of excess arm volume, Quick-DASH scores, and Lymph-ICF subscale scores significantly decreased ($p < 0.001$) in both treatment groups. However, there was no significant difference between the two groups ($p > 0.05$) in terms of changes in these outcomes. The VAS discomfort ($p = 0.015$) and VAS heaviness ($p = 0.014$) scores decreased significantly in the CDT group compared to the ST group. **Conclusion:** The study findings indicated that both treatment approaches were effective in patients with BRCL. However, no additional effect of MLD was found with regard to percent reduction in arm volume in the intensive treatment period of BRCL.

43. [Network Pharmacology Analysis to Uncover the Potential Mechanisms of Lycium barbarum on Colorectal Cancer](#)

Interdiscip Sci. 2020 Dec;12(4):515-525. doi: 10.1007/s12539-020-00397-1. Epub 2020 Oct 13.

Authors

SIO Monthly Digest October 2021

[Yi Lu](#)^{1 2}, [Jiachen Sun](#)^{1 2}, [Minhui Hu](#)^{1 2}, [Xianhe Kong](#)^{1 2}, [Weijie Zhong](#)^{1 2}, [Chujun Li](#)^{3 4}

Abstract

Background: Studies have shown that extracts from *Lycium barbarum* exerted protective effects against colorectal cancer (CRC) cells. We used the network pharmacology method to determine the effects of *L. barbarum* on CRC and to predict core targets, biological functions, pathways, and mechanisms of action.

Method: We obtained the active compounds and their targets in *L. barbarum* via use of the Traditional Chinese Medicine System Pharmacology Database (TCMSP), gathered the CRC targets from Malacards, TTD, GeneCards, and DisGeNET, and chosen the overlapped targets as the candidate targets. After protein-protein interaction (PPI) network analysis, 20 with the highest node degree were selected as the core targets, and their enrichment and pathways were analyzed. Furthermore, we employed iGEMDOCK to validate the compound-target relation.

Result: Eventually, 103 overlapped targets were chosen as the candidate targets. Targets with the top 20 highest node degree were selected as the core targets. Gene Ontology (GO) enrichment analysis indicated that the core targets were enriched in cell proliferation regulation, extracellular space, cytokine receptor binding, and so on. Kyoto Encyclopedia of Genes and Genomes (KEGG) pathway analysis proved that the core targets were significantly enriched in bladder cancer, pathways in cancer. The docking results demonstrated that beta-sitosterol, glycitein, and quercetin had good binding activity to CRC putative targets.

Conclusion: Our work successfully predicted the functioning ingredients and potential targets of *L. barbarum* in CRC and illustrated the potential pathways and mechanisms comprehensively. Nevertheless, these results still call for in vitro and in vivo experiments to validate.

[Development of an Integrative Care Program in a Pediatric Oncology Unit](#)

44.

Complement Med Res. 2021;28(2):131-138. doi: 10.1159/000510247. Epub 2020 Oct 9.

Authors

[Britta Rutert](#)¹, [Wiebke Stritter](#)², [Angelika Eggert](#)², [Ulrike Auge](#)², [Alfred Laengler](#)³, [Georg Seifert](#)^{4 5}, [Christine Holmberg](#)^{6 7}

Abstract

in [English](#), [German](#)

SIO Monthly Digest October 2021

Purpose: The aim of this article is to describe what needs to be considered in implementing care practices, in this case an integrative care program consisting of anthroposophic treatments, in an intensive care unit (ICU) of a teaching hospital.

Methods: We used a pediatric oncology department to implement an integrative care program. We conducted a qualitative study including participant observation and semi-structured interviews with parents, nurses, doctors, and therapists. Data analysis was based on a grounded theory approach and focused on the status quo of care in the ICU.

Results: The following factors needed to be considered: the structure of the ICU, communication and information dissemination, and time constraints. This led to the following components of the integrative care program: (1) a training plan in anthroposophic treatments for all nurses that was conducted by 2 trained anthroposophic nurses, and (2) the introduction of an integrative shift that was on top of regular care at the ICU and focused on delivery of integrative care to patients.

Conclusion: To add new care components to an ICU, the existing context has to be considered. Time constraints and high workload are factors that need to be recognized. In this particular context, a highly flexible program was the solution.

[Effect of acupuncture in the treatment of lymphangioma: a case report](#)

45.

Acupunct Med. 2021 Jun;39(3):232-234. doi: 10.1177/0964528420957016. Epub 2020 Oct 8.

Authors

[Ying Huang](#)¹, [Qi Min](#)¹, [Yongjie Zhang](#)¹

No abstract available

[Oral mucocele treated with acupuncture: a case report](#)

46.

Acupunct Med. 2021 Aug;39(4):400-402. doi: 10.1177/0964528420959340. Epub 2020 Oct 7.

Authors

[So Young Park](#)¹, [Min Hee Kim](#)¹, [Inhwa Choi](#)¹

No abstract available

[The management of hot flushes for men treated with androgen deprivation therapy for prostate cancer: a survey of UK practice](#)

47.

SIO Monthly Digest October 2021

Acupunct Med. 2021 Aug;39(4):394-395. doi: 10.1177/0964528420959078. Epub 2020 Oct 7.

Authors

[William Kinnaird](#)¹, [Ami Mehta](#)², [Carina Guo](#)², [Heather Payne](#)², [Valerie Jenkins](#)³, [Susan Catt](#)³

No abstract available

48. [Prolapsed tongue papilloma cured by administration of the traditional Japanese \(Kampo\) herbal medicine, Keishibukuryogan-ka-yokuinin: A case report](#)

J Integr Med. 2020 Nov;18(6):535-538. doi: 10.1016/j.joim.2020.09.003. Epub 2020 Sep 12.

Authors

[Masahiro Sakata](#)¹, [Jiro Watanabe](#)²

Abstract

Squamous papilloma is a benign mass lesion of the oral mucosa. For papillomas of the tongue, surgery is recommended owing to their malignant potential; however, certain complications may be associated with surgery. A traditional Japanese (Kampo) herbal medicine, Keishibukuryogan-ka-yokuinin (KBGY), has been used to treat viral warts and various skin diseases in Japan. Therefore, the effect of KBGY on papillomas is promising. A 49-year-old Japanese man presented with a wart on his tongue that was about 3 months old. He smoked 5 cigarettes per day. He did not drink alcohol. He had no history of malignant illnesses. He was taking alprazolam for panic disorder. The patient was diagnosed with a suspected papilloma of the tongue at the Department of Otolaryngology and was advised to undergo an excision biopsy to exclude malignancy. However, he refused owing to the fear of an invasive procedure. After informed consent was obtained from the patient, KBGY was prescribed. Three months later, the wart on his tongue spontaneously prolapsed. The histopathological diagnosis was squamous papilloma. There was no indication of malignancy, and the patient discontinued Kampo treatment. He has had no recurrence in the past 3 years. KBGY is a combination of Keishibukuryogan and yokuinin (adlay seeds). Keishibukuryogan may be beneficial for skin or oral mucosal remodeling, and yokuinin may have antiviral properties. The present case report suggests the use of KBGY as an appropriate complementary therapy for squamous papilloma.

49. [A Case of Resolved Vincristine-Induced Constipation Following Osteopathic Medicine in a Patient With Infantile Fibrosarcoma](#)

J Am Osteopath Assoc. 2020 Oct 1;120(10):691-695. doi: 10.7556/jaoa.2020.102.

Authors

[Jennifer A Belsky](#), [Kimberly Wolf](#), [Bhuvana A Setty](#)

Abstract

Vincristine-induced constipation is a common side effect in pediatric oncology patients. We report the case of an infant with histologic diagnosis of infantile fibrosarcoma who developed significant constipation because of ongoing vincristine administration. She was treated with osteopathic manipulative treatment and had significant improvement in symptoms. She was able to stop her home lactulose bowel regimen without signs or symptoms of constipation. This case demonstrates the benefit of osteopathic manipulative treatment for chemotherapy-induced constipation as an effective and simple supportive care option without added adverse events.

50. [Evaluation of an Expert Guided Integrative Therapy Concept in Patients With Breast or Gynecological Cancer During Systemic Therapy](#)

J Evid Based Integr Med. Jan-Dec 2020;25:2515690X20949444. doi: 10.1177/2515690X20949444.

Authors

[Georg Schmidt](#)¹, [Sofia Mathes](#)¹, [Evelyn Klein](#)¹, [Marion Kiechle](#)¹, [Daniela Paepke](#)¹

Abstract

Purpose: Breast and gynecological cancer patients undergoing systemic therapy frequently request integrative therapy concepts. The potential of integrative therapy (IM) lies in minimizing side effects of conventional cancer treatments and therefore decreasing treatment delays. IM can help to improve patients' physical and emotional well-being, optimizing health and quality of life as IM involves patients in their own treatment. A counseling service for integrative medicine concepts as an outpatient program was implemented in our cancer center in 2013.

Methods: In 2016 and 2017 144 breast and gynecological cancer patients were included into our specific IM program. The program comprises biological based complementary and alternative medicines (BB-CAM), a structured exercise therapy, manipulative and body-based practices, nutritional counseling, psycho-oncological and relaxing therapies. Therapists with additional specialization for IM, guide the treatment units. The program was evaluated via self-administered questionnaire.

Results: 78% of the participating patients noticed an improvement by using BB-CAMs. 86% stated to feel better through participation in the structured exercise program. 74% profited from nutritional counseling and 91% from manual therapy. 93% of the patients treated with body compresses considered the application as soothing. The Bio-Frequency Sound Color Bed led to a relaxation in 96%. Psychological therapy improved coping with the disease in 70% of the patients.

Conclusion: Integrative oncology combines the best practices of conventional and complementary therapy, uniting them in a holistic concept. Data show that our integrative therapy concept is well accepted by the patients and that therapy- and disease-related side effects can be reduced.

[Risk evaluation of the use of complementary and alternative medicines in cancer](#)

51.

Ann Pharm Fr. 2021 Jan;79(1):44-52. doi: 10.1016/j.pharma.2020.05.001. Epub 2020 May 30.

Authors

[S Renet¹](#), [A de Chevigny²](#), [S Hoacoglu³](#), [A-L Belkarfa⁴](#), [M Jardin-Szucs⁵](#), [Y Bezie⁶](#), [S Jouveshomme⁷](#)

Abstract

Introduction: Cancer patients use complementary and alternative medicines (CAM) to improve their well-being. Little is known about real risks.

Objective: To highlight 3 different types of axes: 1/cancer patients' perceptions concerning CAM; 2/misinformation/miscommunication about CAM; 3/CAM toxicity (direct toxicity, CAM-anticancer drugs, CAM-cancer interactions).

Method: A questionnaire was proposed to cancer patients for 2 months. The CAM toxicity was analyzed if patients documented their drugs and CAM.

Results: Eighty-five patients responded: 72/85 were taking ≥ 1 CAM. In total, 95% patients were satisfied. There was an increasing CAM intake after cancer diagnosis. One hundred and seventeen different CAM were identified (63 herbs, 24 essential oils, 28 food supplements, 2 homeopathic specialities). Only 30/85 were aware CAM could interact with anticancer drugs. No other type of risk was perceived.

Information sources: 43/85 Internet, 38/85 general practitioner, 38/85 community pharmacist, 32/85 entourage, 25/85 other patients, 22/85 oncologist. In total, 81.3% questioned healthcare professionals (HCP) about CAM. Twelve patients noticed HCP lacked knowledge regarding CAM. The toxicity analysis was carried out for 24 patients who consumed 1 to 24 CAM. In total, 133 CAM were reported, including 87 different CAM. For only 43 CAM/87, studies were found. All patients presented ≥ 1 risk: 14 at risk of CAM-cancer interactions, 15 of CAM-anticancer drug interactions, 21 of CAM direct toxicities.

Conclusion: Many CAM are used by patients. The diagnosis of cancer favors their use. The risks are manifold: low perception of risk that can be induced by CAM, diverse and insecure sources of information and many potential toxicities that are not scientifically documented.

52. [Mind-Body Therapy via Videoconferencing in Patients With Neurofibromatosis: Analyses of 1-Year Follow-up](#)

Ann Behav Med. 2021 Feb 12;55(1):77-81. doi: 10.1093/abm/kaaa030.

Authors

[Ethan G Lester](#)^{1,2}, [Melissa V Gates](#)¹, [Ana-Maria Vranceanu](#)^{1,2}

Abstract

Background: Neurofibromatosis (NF) is a rare genetic disorder associated with substantial deficits in quality of life (QoL). We have previously shown that in this population the Relaxation Response Resiliency Program for NF (3RP-NF) delivered via live videoconferencing is associated with sustained improvement in QoL from baseline through 6-month follow-up over and above an attention placebo control.

Purpose: To examine between- and within-group changes in QoL domains from baseline to 1-year follow-up and 6-month to 1-year follow-up.

Methods: We enrolled and randomized 63 adults with NF. Of these, 52 completed the 6-month follow-up and 53 completed 1-year follow-up. We assessed QoL with the World Health Organization Quality of Life-Brief.

Results: Participation in the 3RP-NF was associated with sustained improvement from baseline to 1 year in physical health QoL (12.68; 95% confidence interval [CI]: 1.76 to 23.59; $p = .024$) and social relations QoL (16.81; 95% CI: 3.03 to 30.59; $p = .018$) but not psychological and environmental QoL, over and above the control (between group changes). Participants in the 3RP-NF improved from baseline to 1 year in psychological (8.16; 95% CI: 1.17 to 15.14; $p = .023$) and social relations QoL (9.93; 95% CI: 1.10 to 18.77; $p = .028$; within-group changes). There were no other significant differences between or within groups from baseline/6 months to 1 year.

Conclusions: The live video 3RP-NF shows promise in improving QoL dimensions over the course of 1 year. Results should be replicated in a fully powered randomized controlled trial.

53. [An art therapy group intervention for cancer patients to counter distress before chemotherapy](#)

Arts Health. 2021 Feb;13(1):35-48. doi: 10.1080/17533015.2019.1608566. Epub 2019 May 2.

Authors

[Rossana L De Feudis¹](#), [Giusi Graziano²](#), [Tiziana Lanciano³](#), [Manuela Garofoli¹](#), [Andrea Lisi⁴](#), [Nicola Marzano¹](#)

Abstract

Background: The aim of this study was to investigate the feasibility and effectiveness of a single group session based on art therapy (AT) for adult cancer patients to reduce anxiety and distress before anticancer treatment. **Methods:** A non-randomized pre-post study design was adopted. Sixty-two patients took part in one of twenty-seven "one-off" sessions held over a four-month period. Sixty-six patients, who simply received routine medical treatment, served as the control group (CG). **Results:** The intervention was appropriate to patients' needs and feasible in the context of their routine medical care. In contrast to the CG, the intervention group(IG) participants demonstrated a decrease in symptoms of anxiety, drowsiness and tiredness. **Conclusions:** The intervention proved suitable to the medical routine of patients' care. The clinical implications of the AT protocol and future research aimed at testing it vs. a different type of psychosocial intervention in a randomized controlled study are discussed.