

O-1197

## Cancer immunotherapy by chimeric antigen receptor in T cells

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### Abstract

Cancer immunotherapy by chimeric antigen receptor in T cells

**Keywords:** Cancer, T cells, immunotherapy



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O-1136

## Evaluation of Epstein-Barr virus infection in patients with ocular lymphoma referred to Farabi hospital, Tehran during 2016-2021

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### Abstract

**Background:** Lymphomas are one of most common ocular adnexal tumors. The role of Epstein-Barr virus (EBV) as an etiologic agent in the development of non-Hodgkin lymphoma has been suggested by detection of membrane protein of virus in these tumors. The presence of EBV in tumoral samples is identified by immunohistochemical staining of latent membrane protein-1 (LMP-1). S, the aim of present study is evaluation of EBV infection in patients with ocular adnexal lymphoma referred to Farabi hospital, Tehran during 2016 to 2021.

**Material and method:** In this cross-sectional retrospective study, 40 paraffin blocks corresponding to patients with ocular adnexal lymphoma admitted to Farabi hospital, Tehran during 2016 to 2021 were immunohistochemically stained by EBV-LMP1 antibody. Membranous and cytoplasmic staining in more than 5% of tumor cells considered as positive staining. Also, data about patients age and gender and histologic subtype of tumors were extracted from patients medical records.

**Results:** The mean of patients age investigated in this study was  $61.1 \pm 15.82$  years and 65% were male. EBV-LMP1 expression was seen in 10 samples (25%). Frequency of this marker in Extranodal Marginal zone lymphoma, Diffuse large B cell lymphoma and Small lymphocytic lymphoma was 23.8%, 33.3% and 33.3% respectively. None of Mantle cell lymphoma and T cell lymphoma samples show EBV-LMP1 expression. Frequency of EBV in patients more than 50 years was significantly higher than patients under 50 years ( $P=0.045$ ). There is no significant relationship between EBV infection with patients gender and tumor histologic subtype.

**Conclusion:** EBV is detectable in one fourth of ocular adnexal lymphomas and its frequency is higher in Diffuse large B cell lymphoma and Small lymphocytic lymphoma and also patients more than 50 years. So more study is necessary for evaluation of EBV infection in pathogenesis of ocular adnexal lymphoma.

**Keywords:** Ocular adnexal lymphoma, Epstein-Barr virus, Latent membrane protein, Immunohistochemistry



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O-1150

## Comparison the prevalence of different genotypes of human papilloma virus (HPV) in women and men infected with HPV in Mashhad

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### Abstract

**Background:** Cervical cancer is the fourth most frequently diagnosed cancer in women. Human papillomavirus (HPV) is responsible for practically all cases of cervical carcinoma. Identification the role of HPV as a necessary cause of cervical cancer led to the development of HPV testing. HPV infection is considered as the most common viral sexually transmitted. HPV infection in men could be considered as a reservoir for inadvertently transmitting infection to women. Moreover, genital HPV infection could be a source for anogenital cancers in men. Mashhad is known as the second largest city of the country and the second largest holy city of the world. The purpose of this study is to compare the prevalence of HPV virus and its genotypes in women and men in Mashhad.

**Methods:** This cross-sectional study was conducted on 1591 people with HPV, of which 204 were men and 1387 were women, who had referred to the central laboratory of Academic Center for Education, Culture, and Research, Mashhad, IRAN, from 2020 to 2022. Pregnancy, being in the postpartum period and having no history of sexual activity were considering as exclusion criteria. LBC sample was used for test. DNA was extracted using SSNP-2000B nucleic acid extraction system produced by Bioperfectus, China. The HPV DNA test was performed using a high + low papilloma strip kit (OPERON, Spain). This kit allows the identification of 37 HPV subtypes, including HR: 16, 18, 26, 31, 33, 35, 39, 45, 51, 52, 53, 56, 58, 59, 66, 68, 69, 73, and 82, and LR: 6, 11, 40, 42, 43, 44, 54, 61, 62, 67, 70, 72, 74, 81, 83, 84, and 91. The obtained results were analyzed statistically with SPSS 22 software. Descriptive tests (prevalence, mean and standard deviation) and chi-square test were used to check the results of the study. A P value of less than 0.05 was considered statistically significant.

**Results:** The results of this study showed that low-risk genotypes are more common in men and high-risk genotypes are more common in women. It was also shown that genotypes 6 and 11 from the low risk group are significantly more common in men than in women.

**Conclusions:** The present study showed that high-risk genotypes, which are the main cause of cervical cancer, are more common in women than in men. The results of the present study showed that the common genotypes of the past are being replaced by other genotypes and more extensive studies are needed for structured preventive and vaccination programs.

**Keywords:** Human papillomavirus, Cervical cancer



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O-1170

## Multiplex Real-Time PCR Diagnostic Panel for Human Papillomavirus Type 16 Viral Load and Genome Physical Status Determination

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### Abstract

**Background:** Human Papillomavirus type 16 (HPV 16) E2 and E6 genes viral load and physical condition of HPV-16 genome have been proposed as indicator biomarkers for development of cervical lesions into malignancies. This study examined the viral load and physical status of the HPV-16 genome in non-cancerous, precancerous and cancerous cervical lesions.

**Methods:** Multiplex real-time PCR was developed to determine HPV-16 E2 and E6 viral load in 132 cervical specimens. E2/E6 viral load ratio was used to determine the physical status of HPV-16 genome.

**Results:** E2 gene viral load was a significant ( $P < 0.001$ ) predictor biomarker in differentiating non-cancerous from precancerous and cancerous samples. E6 gene viral load was significantly different between groups ( $P < 0.001$ ). The specificity and sensitivity of E2 and E6 in distinguishing SCC samples were 100% and 95%.

**Conclusion:** HPV-16 viral load measured through E2 and E6 genes is a reliable indicator of lesion type.

**Keywords:** Human papillomavirus 16, Low Grade Squamous Intraepithelial Lesion, High Grade Squamous Intraepithelial Lesion, Squamous Cell Carcinoma, Viral Load



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O-1177

## Genetic variants associated with response to chemotherapy in breast cancer

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### Abstract

**Background:** The role of genetic variants in response to chemotherapy has been investigated in several studies. The aim of this study was to investigate genetic variants associated with response to chemotherapy in breast cancer patients.

**Methods:** Significant variants ( $p < 10^{-8}$ ) associated with response to chemotherapy were obtained from GWA studies. Candidate variants were identified by haplotype analysis ( $r^2 \geq 0.9$ ,  $D' \geq 0.9$ ) using 1000Genome LD data. To determine the effects of the variants on gene expression, expression quantitative trait loci (eQTL) were evaluated using the GTEx portal. To compare the expression of the identified genes in tumor samples, expression levels were compared between TCGA tumor types and adjacent normal tissues using the TIMER.2.0 database.

**Results:** six rs3820706, rs147451859, rs4784750, rs17587029, rs16830728, and rs16972207 variants were significantly associated with response to chemotherapy in breast cancer patients ( $p < 10^{-8}$ ). All these variants, except rs17587029, were eQTL and affect gene expression. These variants are located on PPCDC, NLRC5, STAM2, TNFSF13B genes, and the expression of these genes significantly changed in breast cancer tissues than normal tissues ( $P \geq 0.05$ )

**Conclusions:** These genetic variants and their associated genes may predict response to chemotherapy in breast cancer patients and may potentially be used in breast cancer-associated genetic panels.

**Keywords:** breast cancer, chemotherapy, variant



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O-1016

## Body image and predictive factors in Iranian women with breast cancer

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### Abstract

**Background:** Breast cancer is the most common cancer and the fifth leading cause of death in Iran. BC treatments associated with the change in appearance may cause concerns over body image. As a multidimensional construct, body image consists of perceptions, thoughts, feelings, and behaviors related to the body's appearance, abilities, and functions. Dissatisfaction with changes in appearance due to cancer and its treatments affects afflicted patients' social status, romantic relationships, and physical activity and causes them problems such as continuous distress, anxiety, and depression. All efforts to improve quality levels of body image in these patients can have a significant effect on their quality of life, psychological disasters, and trends of recovery. The aim of this study was to assess the relationship between demographical factors and body image of patients with breast cancer.

**Methods:** This cross-sectional study was done in 2019 on women with breast cancer. Accordingly, 200 Patients with a diagnosis of breast cancer were selected via the convenience sampling method. The data of the study were collected via questionnaires (Demographic and Body Image after Breast Cancer Questionnaire (BIBCQ)). The data were analyzed using univariate and multivariate linear regression in SPSS25 at a significance level of 0.05

**Results:** The mean age of participants was 48.43 (SD=10.53). The results showed that the variables such as type of treatment ( $p=0.002$ ), physical health ( $\beta=-0.49$ ,  $p<0.001$ ), economic status ( $\beta=-0.62$ ,  $p<0.001$ ), and quality of life ( $\beta=-0.41$ ,  $p=0.003$ ) had the predictability potential of the body image in those under mastectomy. Educational level ( $\beta=0.22$ ,  $p=0.02$ ) and physical health ( $\beta=-0.25$ ,  $p=0.01$ ) factors could predict body image in people with no mastectomy. The educational level and physical health were significantly related to body image, and all of them could determine 11% of the variance of body image.

**Discussion:** The results of the present study revealed that the effective factors of body image in women with breast cancer differed in accordance with the type of treatment. The results of the study indicated that the improvement of the economic status has a positive

effect on the body image of breast cancer. In addition, this factor can improve the quality of life in women who survive breast cancer

**Keywords:** body image, breast cancer, socio-demographic characteristics



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O-1069

## Antioxidant and Anticarcinogenic Potentials of Propolis for Dimethylhydrazine-Induced Colorectal Cancer in Wistar Rats

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### Abstract

Propolis is a natural compound with anticarcinogenic properties. The present study aimed to compare the inhibitory effect of ethanolic extract of propolis (EEP) and vitamin E on dimethylhydrazine-induced colon lesions in rats. In this study, 60 rats were randomly categorized into six 10-member groups. After 13 weeks, blood and colon tissue were sampled to examine some factors. The parameters included red (RBC) and white (WBC) blood cell profile, lactate dehydrogenase (LDH), C-reactive protein (CRP), total protein (TP), creatine kinase (CPK), and albumin, as well as the extent of colon histological lesions, protein expression (adenomatous polyposis coli (APC), proliferating cell nuclear antigen (PCNA), carcinoembryonic antigen (CEA), and platelet-derived growth factor (PDGF)), and oxidative stress markers (total antioxidant capacity (TAC), malondialdehyde (MDA), and superoxide dismutase (SOD)) in colon tissue. A significant decrease was observed in congestion, mitotic index, inflammation, and cell destruction in colon tissue in dimethylhydrazine group in comparison with the control group ( $P < 0.05$ ). The EEP exposed rats exhibited a significant lower oxidative stress than the DMH group ( $P < 0.05$ ). Furthermore, the extract significantly affected TAC level ( $P < 0.05$ ). While the expression level of APC rose substantially in the EEP-treated group compared to the DMH group, the level of PCNA, CEA, and PDGF proteins significantly reduced. It seems that the EEP can efficiently prevent DMH-induced colonic lesions. Furthermore, its effectiveness is more than the vitamin E, which is a strong antioxidant.

**Keywords:** Antioxidant, Colorectal cancer, Dimethylhydrazine, Propolis



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O-1125

## Happiness in cancer patients: hybrid concept analysis

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### **Abstract**

**Background:** Enhancing cancer patients' capacity to acquire skills for promoting happiness can yield valuable outcomes; but unfortunately, there is currently a lack of understanding regarding the meaning of happiness specifically in this context. Therefore, the objective of this study is to determine the concept of happiness among cancer patients.

**Methods:** In this study, hybrid concept analysis was employed. The theoretical stage involved reviewing publications from PubMed, Scopus, Google Scholar, and SID. In the fieldwork phase, semi-structured interviews were conducted with seven patients, three patient visitors, and four nurses. Content analysis was utilized to analyze data from both stages. In the theoretical phase, the findings were subsequently compared, combined, and synthesized to derive a comprehensive definition

**Results:** The findings of the study indicate that happiness, as perceived by cancer patients, encompasses achieving complete health. Additionally, factors contributing to their happiness include improvements in disease conditions, such as reduced chemotherapy and radiotherapy complications, shorter treatment durations, minimal hair loss experiences, easier access to affordable medication, shorter hospital stays, a better sense of well-being compared to sicker patients, and having a healthy family.

**Conclusions:** Happiness can result in a positive outlook on life, and improve immune system. Therefore, it is crucial to prioritize happiness in cancer patients and develop additional strategies to enhance their overall well-being. In fact by understanding the meaning of happiness in cancer patients, it could be easier to explain interventions and policies to promote happiness in these patients. And provide better strategies in care and treatment planning.

**Keywords:** Happiness, Cancer, Concept Analysis, Hybrid, Content Analysis



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O-1179

## Application of mouse models in cancer diagnosis and therapy

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### Abstract

**Background:** The importance of animal models in biomedical research is crucial given the complexity of the current oncology framework and their ability to generate useful data with clinical translation. The creation of complicated cancer animal models that accurately represent the complexity of the tumor and its milieu is now required by recent advancements in the development of innovative cancer therapy techniques. Due to its high level of environmental adaption, genetic variability, and physiological resemblance to humans, the laboratory mouse provide excellent tumor models because they can be genetically altered readily, have a short reproductive cycle, and demonstrate rapid tumor growth.

**Methods:** The methods used to create cancer animal models are diversifying as research progresses, including xenotransplantation, gene engineering, and chemical induction. The use of induced cancer models has drawn a lot of attention since a variety of procedures and approaches are simple to use and readily available. These investigations concentrate on the chemical and physical triggers. An animal cancer model can be created by combining physical stimuli like light (irradiation) and chemical stimuli like cancer cells, tumor tissue, and various genetic constructs including viruses, homologous recombination, and gene editing. The most common method for inducing cancer is to use cancer cell lines especially from human origin to induce xenograft in immunocompromised animals. The most efficient strategy is to exploit genetic engineering to develop genetically programmed cancer models. The first genetically engineered mouse models generated were knock-in and knock-out models of single oncogenes or tumor suppressors. By using the CRISPR/Cas9 system, model building has been transformed since it is faster, cheaper, and more versatile than traditional approaches at producing cancer mice models. The field of humanized mouse models also continues to expand as well, with each iteration bringing us closer and closer to mimicking people's immune systems. Furthermore, the patient-derived xenotransplantation (PDX) model has become a research hotspot in recent years because it may preserve the environment of the underlying tumor and the basic characteristics of cells.

**Conclusion:** Together, the extensive research conducted over the last decades has led to the creation of effective mouse models for cancer. The primary instruments for both present and future investigations of cancer research are these models. They enable studies of both normal and abnormal gene interactions in tumors as well as the recreation of human disease in mice, serving as an important resource for research on chemoprevention as well as the creation and evaluation of novel cancer therapeutics. These models allow for the verification of the drug candidate's target engagement, mechanism of action, and demonstration of in vivo efficacy. They have the potential



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to significantly facilitate and accelerate the administration of novel medications to cancer patients when combined with their related biomarkers.

**Keywords:** mouse models, xenograft, GEMM, PDX



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O-1214

## Enhancing Cancer Treatment through Psychological Interventions

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### Abstract

Cancer treatment is a multifaceted journey, impacting not only the body but also the mind and emotions of patients. This article explores the pivotal role of psychology in enhancing cancer treatment. Drawing from recent research, we delve into how psychological interventions, patient support systems, and personalized strategies contribute to improved treatment outcomes and the overall well-being of cancer patients

**Keywords:** Enhancing, Cancer, Psychological Interventions



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## A Systematic Review On Application Of Deep Learning Techniques In Oral Cancer Diagnosis

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### **Abstract**

Oral cancer (OC) is the most common type of head and neck cancer. According to the latest statistics announced by WHO (1), out of 377,713 new cases of OC, 177,757 cases resulted in death. Cancer is one of the most dangerous and life-threatening diseases in case it is not diagnosed in the early stages. Deep learning (DL) is a new technology and a modern method for early detection of cancer, which, unlike old methods, has reached a high accuracy almost equal to human detection. In some new studies, DL accuracy is higher than human accuracy. Using DL techniques and cutting-edge technologies can be effective in the early detection of OC and reduce the death rate of patients. As a result, it can reduce treatment costs and duration. Our study presents a systematic review of the Artificial Intelligence (AI) techniques of recent articles in OC diagnosis using DL techniques from different biomedical images; scrutinizes methodologies and their accuracy; examines their innovations and limitations; and finally, provides suggestions for future work and facing the existing challenges.

**Keywords:** Oral cancer·Artificial Intelligence·Deep learning



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O-1148

## Prevalence of infection and genotypes of human papilloma virus in women aged 11 to 50 in Mashhad

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### Abstract

**Background:** Cervical cancer is the fourth most common cancer affecting women worldwide. Human papillomavirus (HPV) is associated with a large number of cancers and is responsible for practically all cases of cervical carcinoma. Identification the role of HPV as a necessary cause of cervical cancer led to the development of HPV testing. Mashhad populations are about 3 million and this city attracts more than 20 million tourists and pilgrims every year. The aim of this study is to determine the prevalence of HPV virus and its genotypes in women in Mashhad.

**Methods:** This cross-sectional study was carried out on 3224 women aged between 11 and 50 yrs who were referred to the central laboratory of Academic Center for Education, Culture, and Research, Mashhad, Iran, from September 2020 to September 2022. Pregnancy, being in the postpartum period and having no history of sexual activity were considering as exclusion criteria. LBC sample was used for DNA extraction and then HPV test. DNA was extracted using nucleic acid extraction system produced by Bioperfectus, China. The HPV DNA test was performed using a high + low papillomastrip kit (OPERON, Spain). This kit detect 37 High-risk (HR) and Low-risk (LR) HPV subtypes. The results were analyzed with SPSS 22 software. Descriptive tests (prevalence, mean and standard deviation) and chi-square test were used to evaluate the results of the study. A P value less than 0.05 was considered statistically significant.

**Results:** In the present study, 43% of all participants were infected with HPV. The highest percentage of HPV infection was observed in the age of under 20 yrs. With increasing age, we saw a decrease in the prevalence of HPV infection in the studied subjects. We found 36 different genotypes in all participants. The most common genotypes in the present study were LR HPV6 (24.4%), HR HPV16 (18%), HR HPV53 (12.8%), LR HPV42 (10.7%), LR HPV54 (10.3%), HR HPV52 (10.1 %) and LR HPV91 (10%).

**Conclusions:** The results of the present study show that HPV53, HPV54 and HPV91 genotypes have replaced the common genotypes in the past and more studies are needed to investigate the common genotypes to apply vaccination programs to prevent cervical cancer. Also, the high prevalence of HPV in women under 20 years shows the importance of screening programs at younger ages.

**Keywords:** Human papillomavirus, Cervical cancer, Screening, Genotype



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O-1169

## Human Papilloma Virus (HPV) Infection in Colorectal Cancer

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### Abstract

**Background:** Colorectal cancer (CRC) is the third common cause of malignancy in Iran, and its incidence rate has been raised due to an increase in individual and environmental risk factors.

**Objectives:** The present study aimed to define the role of human papillomavirus (HPV) infection in CRC, then by drawing a phylogenetic tree, we aimed to analysis the sequences of isolated HPVs, and finally determine the viral genome physical status for HPV-16.

**Methods:** A nested-PCR (nPCR), direct sequencing, and INNO-LiPA HPV genotyping assay were carried out for HPV detection, and a quantitative real-time PCR assay (qRT-PCR) was conducted for the physical status of the viral genome.

**Results:** Among 157 subsets, there were 66 cases and 91 controls. Moreover, 5.7% (9/157) were HPV positive by nPCR, among whom 9.1% (6/66) were cases and 3.3% (3/91) were control groups (P = 0.750). The qRT-PCR analysis showed three forms of integrated, episomal, and mixed forms in our three HPV-16 strains. A higher rate of HPV infection was detected in the CRC cases; however, it was not statistically significant.

**Conclusions:** Although there were limited positive results, higher ages (> 65) were related to HPV involvement and CRC outcome. Furthermore, 9.1% of the CRC cases were infected with HPVs. The HPV-16 genome integration is observed in high-grade cancer cases with severe malignancy in CRC patients.

**Keywords:** Colorectal Cancer (CRC), Human Papillomavirus (HPV), Integration, Oncogenic Viruses, Viral Infection



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O-1173

## Acute lymphoblastic leukemia

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Mazandaran University of Medical Sciences

### Abstract

Acute lymphoblastic leukemia (Dr. Ahmad Tamdani)

**Keywords:** Acute lymphoblastic leukemia cancer



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O-1176

## The Relationship between Religious Well-Being, Existential Well-Being, Fear of Progression and Quality of Life in Patients with Cancer: The Mediating Role of Hope

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### Abstract

**Background:** The purpose of the study was to examine the relationships among religious well-being, existential well-being, fear of progression and quality of life in Iranian patients with cancer and to evaluate the potential mediating role of hope on these relationships .

**Methods:** This predictive cross-sectional study was done in 2023. Study constructs included the religious and existential wellbeing, cancer fear of progression, Snyder Hope, and quality of life. AMOS software (v27) was utilized for all study analyses. Covariance based-structural equation modeling (SEM) was used to assess the measurement and mediation models.

**Results:** The mean age of cancer patients was 49.14 (SD = 16.16). The results of the direct effect showed a significant positive relationship between religious well-being and hope (B = .164, p < .001), and between hope and quality of life (B = .212, p < .001). Also, significant negative relationship between fear of progression and hope (B = -.147, p < .05) was founded.

**Conclusions:** Demonstrated a significant positive relationship between hope and quality of life, as well as religious well-being and hope, suggests the influential effects of hope and religious well-being on improving quality of life in patients with cancer. The significant negative relationship between fear of progression and hope suggests that managing fear of progression may be an important factor in increasing hope and improving quality of life in cancer patients. These findings highlight the importance of addressing religious well-being, hope, and fear of progression in providing care for patients with cancer.

**Keywords:** Cancer, Religious wellbeing, Existential wellbeing, Quality of life, Hope, Fear of progression



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O-1215

## Psychology's Crucial Role in Cancer Research and Patient Care

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### Abstract

Cancer is not merely a physiological battle; it is a profound psychological and emotional journey for both patients and their families. This article delves into the extensive applications of psychology in cancer research and treatment, emphasizing the importance of understanding and addressing the psychological aspects of cancer. Through the lens of real-world research, we explore how psychological interventions, patient support systems, and coping strategies contribute to the holistic well-being of cancer patients

**Keywords:** Psychology's Crucial Role in Cancer Patient Care



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O-1086

## Quantitative analysis of magnetic resonance images by the aid of machine learning for glioma grading: a radiomics study

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### Abstract

**Introduction:** One of the most critical challenges in diagnosing gliomas is differentiating low-grade from high-grade tumors. Classification of patient groups in terms of disease grading can significantly impact the process of diagnosis, treatment, and follow-up, which requires logical and personalized methods specific to each patient. Radiomics is a newly emerging machine learning-based technology that could resolve the problem of subjective judgments by radiologists that are vulnerable to inter-observer variability by converting encrypted medical images into usable data and extracting high throughput imaging features, and relating feature data to clinical outcomes. This study aimed to improve the differentiation performance of grades II and III gliomas using a completely non-invasive and quantitative method by radiomics analysis of magnetic resonance imaging (MRI) based on a radiation oncology tumor border identification perspective.

**Methods:** In this study, MRI images of 120 patients with glioma were obtained and divided into a training cohort (n=80, 40 grade II and 40 grade III) and an independent validation cohort (n=40, 20 grade II and 20 grade III). All images were first resampled to 512\*512 matrix size and 1\*1\*1 mm<sup>3</sup> voxel size. In each image, the gross tumor volume (GTV) area was drawn by an oncologist and selected as the region of interest (ROI) for analysis. Then, we extracted quantitative information from the selected tumor volumes. More than one hundred features were extracted from each patient's images. They included three main groups intensity histogram (mean, median, skewness, kurtosis, etc.), shape (volume, surface area density, maximum diameter, etc.), and textural information (homogeneity, heterogeneity, correlation, cluster tendency, contrast, etc.). The segmentation and feature extraction process was done in 3D Slicer software with the aid of the pyradiomics extension. Machine learning-based models were trained and then validated on the independent cohort using the support vector machine (SVM) algorithm in MATLAB 2021b software. The models' performance was assessed by calculating the area under the curve (AUC) of the receiver operating characteristic (ROC).

**Results:** Our findings showed that using a linear SVM algorithm in conjunction with extracting radiomics features from GTV regions is an efficient approach for differentiating glioma grade II and III tumors completely non-invasive. Machine learning-based modeling showed high performance in both training (AUC=0.90, Accuracy=0.82) and validation (AUC=0.84,



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Accuracy=0.85) cohorts. Homogeneity, correlation, kurtosis, and surface area density were the four most predictive radiomics features in terms of glioma grading in this study (p-value<0.05).

**Conclusion:** The complexity of semi-automated and automated AI-based methods of segmentation has been always a big obstacle in the way of radiomics being practically implemented in the routine clinical diagnosis and management of patients and specifically glioma patients. Simple volume delineation such as gross tumor volume (GTV) may improve not only the segmentation workflow but also radiomics inter-and intra-observer reproducibility. Radiomics analysis of glioma tumors based on GTV regions and training of linear SVM models can lead to highly non-invasive and accurate diagnoses of patients. It has the potential to complement or replace tumor biopsies and develop novel prognostic markers for glioma patients in the near future.

**Keywords:** Glioma Tumors•Machine Learning•Gross Tumor Volumes•Magnetic Resonance Imaging•Radiomics



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O-1168

## Evaluation of anti-growth and anti-angiogenic effects of 5HT2A rec antagonist in xenograft model of colon cancer and expression of VEGF, NfKB, BAX, Caspase9, and Bcl2

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### Abstract

**Background:** One of the most common cancers of the gastrointestinal tract is colorectal cancer, according to some studies, serotonin can play a proliferative role by stimulating the cAMP-dependent MAPK pathway. Also there are some evidences about role of 5HT receptors in some cancers as gastrointestinal, breast and bladder and breast cancers.

**Objective:** According to these backgrounds, we have aimed to investigate the effect of 5HT2A receptor antagonist (ritanserin) on expression of apoptotic and angiogenesis factors as (VEGF, NfKB) and Bax and Bcl2 in an In vivo model in nude mice.

**Methods:** The drugs were injected into mice for 21 days, and intradermal tumor was induced by injecting 10,000,000 (HT29) suspension of colorectal cell into the flank muscle of nude mice. Tumor size were examined macroscopically three times a week. After three weeks, the mice were killed and the tumor tissue was removed and the Real-time PCR method was used to evaluate the angiogenic genes of VEGF and NfKB and Bax, Caspase9 and Bcl2 protein expression. The DATA analyzed by Friedman test and One-way ANOVA and post TUKEY-TEST with SPSS software with P value  $\leq 0.05$

**Results:** There was a significant difference in the expression of bcl2 gene in the drug groups compared to the control group  $P \leq 0.05$ . The expression of bcl2 gene in drug groups has decreased compared to the control group,  $P \leq 0.05$ . The results of Kruskal-Wallis test in the expression of caspase9 gene showed inequality in the mean expression of caspase9 gene in the groups. The effect of ritanserin on the expression of angiogenesis factors in cells isolated from nude mice by RT-PCR showed that the level of the expression of nfkB in ritanserin group (4/73) and cis group (0/17) was lower than rit-cis groups (13/88) and control (1/00). The expression level of VEGF factor in rit group (3.26) was lower than cis group (4.90) which indicates the inhibitory effect of ritanserin is even more than positive control (cisplatin) on the expression of angiogenesis genes.

**Conclusion:** Our study has shown that Ritanserin as 5HT2A receptor antagonist has anti-tumor and anti-angiogenic effect in xenograft model in nude mice which some parts of its' effect could be through inhibition of NfKB as an inflammatory factor and VEGF as angiogenic factor and also through affecting on apoptotic factors as Bax, Bcl2 and Caspase9.



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**Keywords:** Colon cancer, Ritanserine, HT2A receptor, Angiogenesis, VEGF, NfKB, BAX, Bcl2



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O-1036

## Application of Censored Quantile Regression to Investigation of prognostic factors of survival in breast cancer: A multi-center study

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### Abstract

**Background:** The prognostic factors of survival can be accurately identified using data from different health centers, but the structure of multi-center data is heterogeneous due to the treatment of patients in different centers. In survival analysis, the shared frailty model is a common way to analyze multi-center data that assumes all covariates have homogenous effects. We used a censored quantile regression model for clustered survival data to study the impact of prognostic factors on survival time.

**Methods:** This multi-center historical cohort study included 1785 participants with breast cancer from four different medical centers. Age at diagnosis (years), tumor size (cm), Involvement of lymph nodes, tumor grade, type of surgery, auxiliary treatment with chemotherapy, radiotherapy, recurrence, and metastasis were the prognostic factors considered in this study. A censored quantile regression model with a gamma distribution for the frailty term was used, and P-value less than 0.05 considered significant.

**Results:** The 10th and 50th percentiles (95% confidence interval) of survival time were 26.22(23-28.77) and 235.07(130-236.55) months, respectively. The effect of metastasis on the 10th and 50th percentiles of survival time were 20.67 and 69.73 months, respectively (all P-value<0.05). An increase in the number of involved lymph nodes decreased the quantiles of survival time. The frailty variance was significant, which confirmed that, there was significant variability between the centers.

**Conclusions:** This study confirmed the usefulness of a censored quantile regression model for cluster data in studying the impact of prognostic factors on survival.

**Keywords:** breast cancer, frailty model, quantile regression, survival time



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O-1163

## Imaging of HER2 Expression in Breast Cancer patients Using the New 99mTc-Labeled Small Peptide

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### Abstract

**Introduction:** Overexpression of human epidermal growth factor receptor 2 (HER2), as a predictive biomarker, is associated with worse clinical outcomes in cancer, while its accurate identification has led to the selection of effective treatment methods. The aim of this study is the clinical evaluation of the peptide labeled with 99mTc in breast tumor patients for the imaging of cancers with increased HER2 expression.

**Methodology:** The new peptide was labeled with technetium-99m. 24 eligible female patients with breast cancer were included in the study and SPECT imaging was performed at different times, 30 minutes, 1, 2 and 4 hours after radiopharmaceutical injection and the results were compared with histopathological results. The pharmacokinetics of the labeled peptide was investigated in three patients.

**Findings:** 99mTc-HYNIC-LY peptide was healthy and without complications. The radiopharmaceutical has a rapid excretion in the body and is usually excreted through the kidneys. The labeled peptide was able to identify the HER2 status in the primary tumor of the patients to an acceptable level and was consistent with the immunohistochemical results.

**Discussion and conclusion:** The safety evaluation results confirmed the suitability of the 99mTc-HYNIC-LY peptide to advance to the first-in-human clinical trial, and this radiopeptide was able to detect HER2-positive malignant breast tumors without any complications, although for primary tumors May not be ideal due to absorption of normal breast tissue.

**Keywords:** breast cancer, clinical evaluation, technetium-99m, HER2 receptor, LTVPWY peptide



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O-1152

## The effect of community-based interventions on prostate cancer screening in the elderly based on the Health Belief Model

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### Abstract

**Introduction:** Prostate cancer is one of the most common malignant cancers among men worldwide. One way to control this disease is screening. One of the models that can be used to identify and change the beliefs and attitudes of the elderly and their families is the health belief model. Considering the lack of similar studies; this study was performed to determine the effect of community-based interventions on prostate cancer screening in the elderly based on the Health Belief Model.

**Methods:** This study was a randomized field trial. The statistical population included all elderly men over 60 years of age with electronic files in comprehensive health service centers in Malayer in 2020-2021. The samples were 250 eligible elderly who were divided into control and intervention groups by stratified random sampling. For the intervention group, trainings based on the health belief model were performed. The data collection tool was a standard questionnaire, which consisted of three sections: demographic information, subjects' perception of intention to perform screening behaviors for cancer prostate based health belief model. Questionnaires were given to both groups before and after the intervention. Data were analyzed using SPSS software version 22 and statistical tests, MANOVA, chi-square and Fisher's exact test.

**Results:** Data analysis showed that there was no significant difference in the frequency distribution of the experimental and control groups in terms of demographic variables except for the job variable ( $P > 0/05$ ). The results showed that the intervention had an increased relative chance of screening test in the experimental group by 6.3%, but this difference was not significant statistically (OR = 063, OR). 95% CI: 0 / 535- 2/110,  $P = 0/862$ ). Data analysis showed that the comparison of the mean total score of health belief model constructs at the beginning and end of the study was different in the experimental and control groups, which was significant statistically ( $P < 0.001$ ). Marginal model showed that after adjusting the effect of confounding variables, there was a statistically significant difference between the two groups of intervention and control in terms of the mean change in structures of perceived intensity, perceived benefits, perceived self-efficacy and awareness ( $P < 0/05$ ).

**Conclusion:** Educational interventions based on Health Belief Model can encourage the elderly to prostate cancer screening. It is suggested that the educational program designed in this study be



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implemented in the country's health care system for early diagnosis, treatment and control of prostate in the elderly.

**Keywords:** Community- Based Care; Elderly; Prostate Screening; Health Belief Model



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O-1184

## Epidemiology of cancer in Iran and Mazandaran province

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### **Abstract**

With the changes created in the human lifestyle, we are witnessing a change in the incidence of diseases and an increase in the incidence of non-communicable and chronic diseases, including cancer. With the increasing incidence of cancer in recent years, this disease is considered a threat to the life and health of societies in all countries of the world, including Iran. Cancer is known as the second-leading cause of death and the cause of more than 15% of deaths in the world, with an annual death rate of more than 9.5 million people. According to the latest GLOBOCAN report, the incidence of cancer is estimated at 19.3 million people in the world. The latest statistics show that 70% of all cancer deaths occur in low- and middle-income countries, including Iran. It is estimated that the rate of cancer in these countries will increase by 75% by 2025, compared to 2000. In Iran, cancer is one of the most common non-communicable diseases and is considered the third cause of death after cardiovascular diseases and road accidents. In 2018, in Mazandaran province, the crude rate and age-standardized rate (ASR) of all cancers were 213.7 and 185.4 per hundred thousand people, respectively, and the number of new cases of cancer in men was small (0.2 percent). It is less than women. Among cancers, stomach, colon, skin (except melanoma) and thyroid cancers have the highest frequency of new cases in Mazandaran province. Therefore, this category of cancers is one of the health priorities in the region, and planning to control them should be considered one of the main priorities of this sector. Also, the age-standardized incidence of cancers in the city and village populations was 200.6 and 154.1, respectively. This difference can indicate that the risk factors for cancer are higher in cities than in villages, and the difference in the incidence of cancer in different cities of the province can be caused by the difference in exposure to cancer risk factors in different cities or the referral of patients to the center and larger cities. Which has led to an increase in the incidence of cancers in these areas falsely.

**Keywords:** Epidemiology·Iran·cancer



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O-1185

## Oncology treatment in-transit

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### Abstract

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**Keywords:** oncology·in-transit·treatment



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O-1186

## The Impact of Radiotherapy in Cancer Treatment

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### **Abstract**

**Background:** Cancer is a devastating disease that affects millions of people worldwide. Over the years, various treatment modalities have been developed to combat this deadly illness. One such treatment option is radiotherapy, which utilizes high-energy radiation to target and destroy cancer cells.

Radiotherapy plays a crucial role in the management of cancer by either curing the disease or alleviating symptoms. It can be used as a primary treatment modality or in combination with surgery and chemotherapy. The main principle behind radiotherapy is to deliver ionizing radiation to the tumor site, causing damage to the DNA within cancer cells and preventing their ability to divide and grow.

**Discussion:** One significant advantage of radiotherapy is its ability to target specific areas affected by cancer while minimizing damage to healthy tissues surrounding the tumor. This precision is achieved through advanced imaging techniques, such as computed tomography (CT) scans and magnetic resonance imaging (MRI), which allow for accurate tumor localization. Additionally, modern radiotherapy machines employ sophisticated technology, such as intensity-modulated radiation therapy (IMRT) and stereotactic radiosurgery (SRS), which further enhance treatment accuracy.

The effectiveness of radiotherapy depends on various factors, including tumor type, stage, location, and patient characteristics. In some cases, radiotherapy alone can lead to complete tumor regression and cure the disease. In other cases, where cure may not be achievable, radiotherapy can still play a vital role in palliative care. Palliative radiotherapy aims to alleviate symptoms caused by tumors that cannot be completely eradicated. It provides relief from pain, bleeding, obstruction, or other distressing symptoms associated with advanced cancers.

Despite its numerous benefits, radiotherapy does have potential side effects. These can range from mild to severe, depending on the treatment site and individual patient factors. Common side effects include fatigue, skin changes, hair loss, and temporary or permanent damage to surrounding tissues. However, advancements in radiotherapy techniques have significantly reduced the occurrence and severity of these side effects.

**Conclusion:** In conclusion, radiotherapy is a valuable treatment modality in the fight against cancer. Its ability to precisely target tumors while sparing healthy tissues makes it an effective option for both curative and palliative care. With ongoing advancements in technology and



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treatment planning, radiotherapy continues to evolve as an essential component of comprehensive cancer management.

**Keywords:** radiation•treatment•cancer



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O-1187

## New developments in nuclear medicine

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### **Abstract**

New developments in nuclear medicine

**Keywords:** developments, research, nuclear medicine



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O-1188

## The role of bone marrow transplantation in cancer treatment

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### **Abstract**

The role of bone marrow transplantation in cancer treatment

**Keywords:** treatment, bone marrow transplantation, cancer



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O-1193

## Nutrition and cancer

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### Abstract

Evidence shows that more than a third of cancer deaths are related to nutrition and lifestyle behaviors, including poor diet, inactivity, alcohol consumption, overweight and obesity. Nutrition can alter the carcinogenesis process at every stage, including carcinogen metabolism, cell and host defense systems, cell differentiation and tumor growth.

The complexity of the diverse dietary pattern creates a great challenge in the course of studies. In recent decades, the focus of nutrition research has shifted from the study of the effects of nutrients and foods to the study of dietary patterns. Assuming that combinations of foods/nutrients can have synergistic and/or antagonistic effects beyond the individual components. In this context, different dietary patterns have been associated with health benefits.

Among the dietary patterns, which are mainly based on plant foods but also accept animal foods in small amounts, is the Mediterranean diet. The preference of consuming and producing seasonal and local food forms a food pattern that considers both health and environmental issues. The traditional MedDiet is not only a group of healthy foods, but an ancient cultural pattern that includes the way foods are selected, processed, and distributed, along with other lifestyle basics.

Some of the mechanisms that may help explain the benefits of the Mediterranean diet include the reduction of oxidative stress and chronic inflammation, changes in hormones and growth factors associated with cancer pathogenesis, and the key mechanism that may help explain the benefits of the MedDiet is the gut microbiota.

**Keywords:** Nutrition, cancer, dietary pattern, Mediterranean diet



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O-1194

## Symptom control in cancer patients

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### **Abstract**

Symptom control in cancer patients

**Keywords:** Symptom, cancer, control



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O-1195

## Caring for cancer patients at the end of life

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### **Abstract**

Caring for cancer patients at the end of life

**Keywords:** cancer·Caring·end of life



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O-1196

## Nursing care in radiotherapy

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### Abstract

Background: Radiotherapy is one of the treatments that, in addition to wide benefits, also has certain side effects. The purpose of this study was to investigate the condition of cancer patients after therapeutic interventions and necessary care during and after radiotherapy.

Methods: This review study was done using the available Persian and English language databases. Keywords include cancer, nursing care, radiotherapy complications. The articles of the last ten years and the latest edition of related books were examined.

Results: Nursing care includes teaching the patient and his companion, care before, during and after radiotherapy, which is mentioned below:

Teaching the patient about: Timely and regular attendance at radiotherapy sessions, Erasing or not moving the signs or points of tumor placement and radiation, Immobilization of the patient during the radiation (not moving the radiation), No sunlight to the treated skin, Adequate nutrition and proper rest during treatment, Absence of cold or warm body compresses during radiotherapy (due to skin sensitivity), Using lukewarm water if needed to wash the treatment area, Being aware of the physician's medical or nutritional treatment.

Nutrition during radiotherapy includes: Provision of sufficient calories and abundant proteins, use of appetizing foods (due to nausea - swallowing disorder), Using small, fresh food often

Attention to the factors that increase the patient's skin reactions: Smoking and smoking, taking chemotherapy drugs at the same time as radiotherapy, moist and warm treatment area, and skin friction with clothes

Chronic skin allergies Care during radiotherapy (skin care): Keeping the skin clean and dry, Not using strong detergents, Keeping the skin moist (not using lotion, perfume, powder, cosmetics, adhesives or fragrances), Not using moisturizer on an open wound, No rubbing or massaging the treated area, Wearing clothes with cotton fibers and loose, not exposing the skin to very hot or cold temperatures, even heating pads, hot water bottles, ice, etc., Not using aftershave after trimming the hair in the treated area, Do not use sunscreen on the treated skin for the rest of your life, Not washing purple marks in the treatment area or glue poi, Not scrubbing the skin of the treated area, Not using hot tubs, saunas, heating pads and ice packs, Not using adhesive tape or adhesive bandages on the skin



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Diet during radiotherapy includes: Having a balanced diet with foods rich in protein and calories, Drink plenty of fluids, Consult a physician before taking any vitamins, herbal medicines or supplements Control of nausea, vomiting and diarrhea according to the following points: Consumption of low-fiber, soft foods, Not consuming spicy, fried, fatty or carbonated foods, Not consuming foods with a lot of sugar

Dealing with fatigue by observing the following tips: At least 8 hours of sleep per night, Short rest during the day, Short walk in the day, Spending energy on doing the most important things, and Not overdoing things.

The following symptoms should be reported to the physician: Redness and itching, Discomfort, Blisters or secretions, Bleeding Difficulty breathing or swallowing, Severe confusion or difficulty waking up, and Seizures or fainting

Referral of the patient to the medical service center: Sore throat, White spots in the mouth or throat, Fever of 38 degrees or higher, Severe nausea or vomiting, New or worsening bleeding and bruising, Pain that does not improve with medication, melena, Inability to eat due to mouth sores or nausea, Severe cough or hoarseness, and Painful swelling or redness in the legs

Conclusion: By following the points mentioned in the findings, possible side effects caused by radiotherapy can be avoided.

**Keywords:** side effects, radiotherapy, necessary care



O-1198

## Genetic diagnosis of cancer

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### **Abstract**

Genetic diagnosis of cancer

**Keywords:** Genetic·cancer·diagnosis



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O-1200

## The role of molecular diagnosis in common eye cancer

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### Abstract

Ocular melanoma is an extremely rare form of cancer that affects the eye with an incidence of 5 per million adults. Although rare, it is the most common primary cancer of the eye in adults. and is caused by multiple molecular abnormalities. In most people, this cancer arises in a part of the eye known as the uveal tract. a will develop metastases. When uveal melanoma does recur, it often does so in the liver. About 50% of people with uveal melanomma is a challenging cancer to treat, and a broad range of treatments can be used, including immunotherapy, molecularly targeted agents, and a number of liver-directed treatments such as bland embolization, chemoembolization, immunoembolization, radioembolization, and infusion of chemotherapy into the liver. The prognosis for metastatic uveal melanoma patients has historically been quite poor, with limited overall survival.

UM is often characterized by multiple chromosomal aberrations. Abnormalities on chromosomes 1, 3, 6 and 8 have been observed in 17–61% of UM cases. Activation of BRAF by RAS results in the phosphorylation of kinases, such as MEK1/2 and ERK1/2, which induces a multitude of proliferative and survival processes. Gene expression profiling is currently used to classify UMs into two distinct types depending on their ability to metastasize. Class 1 are tumors with a 1% chance of spreading, while class 2 are tumors that have a 25.9% chance of forming secondary tumors. Retinoblastoma is the most common primary intraocular tumor in children and infants with the approximate incidence of 1/15–20,000 live births.

Retinoblastoma is an intraocular tumor with hereditary and sporadic forms. The major gene responsible for retinoblastoma is RB1, and it harbors a large spectrum of pathogenic variants. Tumorigenesis begins with mutations that cause RB1 biallelic inactivation preventing the production of functional pRB proteins. Depending on the type of mutation the penetrance of RB is different. However, in small percent of tumors additional genes may be required, such as MYCN, BCOR and CREBBP.

MYCN-amplified retinoblastomas demonstrate unique pathogenesis and aggressive behavior.

**Keywords:** molecular diagnosis, eye, cancer



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O-1201

## Screening of cancer prevention behaviors in Iranian women: challenges and solutions

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دانشگاه علوم پزشکی بابل

### **Abstract**

Screening of cancer prevention behaviors in Iranian women: challenges and solutions

**Keywords:** Screening, prevention, cancer



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O-1202

## A deep cascade architecture for bronchoscopic image classification

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علم و صنعت ایران

### **Abstract**

A deep cascade architecture for bronchoscopic image classification

**Keywords:** deep cascade, bronchoscopy, image classification



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O-1203

## A review of deep learning methods in cancer diagnosis and treatment

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### **Abstract**

A review of deep learning methods in cancer diagnosis and treatment

**Keywords:** deep learning, cancer, diagnosis and treatment



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O-1204

## Biocomputing and cancer

Mohsen Asouri

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### **Abstract**

Biocomputing and cancer

**Keywords:** Biocomputing, cancer, Next Generation Sequencing



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O-1205

## Environmental pollution and gastrointestinal cancers

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### Abstract

سرطان‌های دستگاه گوارش بخاطر بروز قابل توجه و نیز مورتالیتی بالای برخی از آنها از قبیل سرطان‌های کولورکتال، معده و مری، از مسائل مهم حوزه سلامت بوده که هم فرد و هم جامعه را تحت تاثیر قرار داده و از اهمیت قابل توجهی برخوردار می‌باشند. سرطان‌های دستگاه گوارش می‌توانند ناشی از ترکیبی از عوامل ژنتیکی، سبک زندگی، عوامل محیطی و رژیم غذایی باشند که هر یک بصورت مستقل و یا بعنوان عامل زمینه ساز عامل دیگر، سبب بروز این سرطان‌ها می‌شوند. بجز نقش عوامل ژنتیکی که غیر قابل تعدیل می‌باشد سایر عوامل قابل تعدیل می‌باشد بطوریکه ۵۹ درصد سرطان‌های مری و ۵۴ درصد سرطان‌های معده و سرطان‌های روده قابل پیشگیری می‌باشند. تغییرات قابل توجه و سریع در بروز برخی سرطان‌ها طی چند دهه گذشته تنها می‌تواند به تغییرات مواجهه جمعیت با عوامل محیطی و تغییر سبک زندگی نسبت داده شود. نقش عوامل محیطی در سرطان‌های مختلف متفاوت می‌باشد. آلودگی‌های محیطی از طرق مختلف می‌توانند سبب گسترش سرطان‌های گوارشی گردند که شامل آلودگی هوا، آلودگی آب، آلودگی مواد غذایی، تماس‌های شغلی، فلزات سنگین، قرارگیری در معرض تشعشع درمانی و طبیعی می‌باشد. در این بین آلاینده‌های موجود در هوا می‌توانند در سرطان‌های معده و کولورکتال نقش داشته باشند. آفت کش‌ها و مواد شیمیایی صنعتی بصورت مستقیم یا با ورود به منابع آبی سبب افزایش میزان بروز همه سرطان‌های گوارشی می‌گردند. فلزات سنگین هم در بروز اکثر سرطان‌های گوارشی بجز کولورکتال می‌توانند تاثیر گذار باشند. مقادیر بالای نیترات در آب آشامیدنی خطر ایجاد سرطان معده را افزایش می‌دهد. یکی از عوامل آلودگی‌های زیست محیطی زباله‌های تولیدی توسط انسان‌ها و نیز نحوه مدیریت آن می‌باشد که دفن زباله و شیرابه‌های آن می‌تواند حاوی طیف وسیعی از آلاینده‌ها از جمله فلزات سنگین و مواد شیمیایی آلی که از طریق آلودگی آب‌های سطحی و زیر زمینی سبب آلودگی آب مصرفی و تجمع زیستی در موجودات و گیاهان مصرفی شوند. برای مقابله با این خطرات، اپراتورهای دفن زباله باید اقداماتی را برای جلوگیری از مهاجرت شیرابه و تصفیه مناسب شیرابه قبل از رهاسازی در محیط انجام دهند. علاوه بر این، نظارت بر کیفیت آب‌های زیرزمینی در نزدیکی محل‌های دفن زباله برای تشخیص زودهنگام هر گونه آلودگی و انجام اقدامات اصلاحی مناسب و توجه به مسائل زیست محیطی برای حفظ سلامت و بخصوص سرطان‌های گوارشی ضروری می‌باشد.

**Keywords:** آلودگی زیست محیطی، سرطان‌های گوارشی، پسماند



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O-1210

## Application of deep learning in breast cancer diagnosis

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### **Abstract**

Application of deep learning in breast cancer diagnosis

**Keywords:** learning, diagnosis, breast cancer



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O-1213

## Potential therapeutic effects of natural products in Human Papillomavirus (HPV) related cancers

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### Abstract

Potential therapeutic effects of natural products in Human Papillomavirus (HPV) related cancers

**Keywords:** therapeutic effects, Human Papillomavirus, natural products, cancers



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O-1076

## Investigating the quality of life of brain tumor patients referred to hospitals affiliated to Tehran University of Medical Sciences , 2019-2021

فاطمه بهرام نژاد - سمیرا عیدی

دانشگاه علوم پزشکی تهران - دانشگاه علوم پزشکی تهران

### Abstract

مقدمه: در حال حاضر درمان قطعی برای بیماران مبتلا به تومورهای بدخیم مغز وجود ندارد. لذا اولویت درمانی برای این بیماران طولانی تر کردن عمر البته با حفظ کیفیت زندگی و تسکین علائم بیماری (مراقبت تسکینی) می باشد. درمان برای اغلب تومورهای مغزی جراحی همراه با رادیوتراپی، شیمی درمانی یا رادیو شیمی درمانی می باشد. با این حال، همه روش های یاد شده دارای عوارض بوده و می توانند، منجر به افزایش عوارض بیماری شوند. بدین طریق کیفیت زندگی این بیماران را هم تحت تاثیر قرار دهد. بر همین اساس، مطالعه حاضر با هدف تعیین سطح کیفیت زندگی بیماران مبتلا به تومور مغزی مراجعه کننده به بیمارستان های وابسته به دانشگاه علوم پزشکی تهران انجام شد.

روش کار: مطالعه حاضر یک پژوهش مقطعی در فاصله تیرماه ۱۳۹۹ تا خرداد ماه ۱۴۰۰ در بیمارستان های وابسته به دانشگاه علوم پزشکی تهران است. نمونه های پژوهش شامل ۲۰۶ بیمار که معیار های ورود به مطالعه را داشتند، بود. بیماران به صورت در دسترس وارد مطالعه شدند. داده های مطالعه با کمک پرسشنامه های دموگرافیک و پرسشنامه ی کیفیت نسخه ۱۹ مورد تجزیه و تحلیل قرار گرفت SPSS زندگی تومور مغزی سنجیده شد. داده های بدست آمده با نرم افزار

نتایج:

بیمار پرسشنامه های مربوطه را تکمیل کردند. از آنجایی که پیگیری از سوی پژوهشگر به صورت مکرر بوده، لذا 206 ریزی در حجم نمونه در این مطالعه وجود نداشت. یافته ها نشان دهنده آن بود که ۵۳/۹ درصد از بیماران مورد پژوهش زن بودند و ۶۳/۲ درصد سن بین ۳۰ تا ۴۰ سال داشتند. میانگین (انحراف معیار) نمره کلی کیفیت زندگی این بیماران  $16/94 \pm$  و  $28/63$  بود. در بعد عدم قطعیت آینده  $25/09 \pm 40/37$ ، اختلال بینایی  $25/0 \pm 36/30$ ، عملکرد حرکتی  $25/0 \pm 27/93$  و در بعد نقص ارتباطی  $26/85 \pm 24/48$  بود.

در بررسی (05/0P<math><math>001/0p<math><math>0.021p=) زندگی در بیماران بالای ۵۰ سال به طور معنی داری کمتر از زیر ۳۰ و وضعیت (001/0p<math><math>001/0p=) ارتباط معنی دار آماری داشته است به طوریکه مقایسه دو به دو توکی نشان دهنده آن بود که میانگین کیفیت (001/0p=) تاهل بود (0.021p=) زندگی در بیماران بالای ۵۰ سال به طور معنی داری کمتر از زیر ۳۰

نتیجه گیری: نتایج مطالعه حاضر نشان داد که میانگین کیفیت زندگی بیماران مبتلا به تومور مغزی در سطح پایینی است و این نشان دهنده اهمیت به کیفیت زندگی این افراد و برنامه ریزی برای بهبود آن است. لذا توصیه می شود، مسئولین و دست اندرکاران نظام سلامت برای بهبود کیفیت زندگی این بیماران برنامه ریزی کرده و عوامل دخیل بر عدم ارتقای کیفیت زندگی این بیماران را شناسایی و در جهت رفع آنها تلاش کنند.

**Keywords:** کیفیت زندگی، تومور مغزی، تهران



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O-1108

## Incidence of Breast and Cervical intraepithelial Lesions: Results of a Screening Program for Women

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دانشگاه علوم پزشکی اصفهان

### Abstract

**Background:** and **Objective:** Breast cancer is a malignant lesion caused by abnormal changes and growth in breast tissue epithelial cells, including glands, lobules, and larynx. Therefore, the current study's objective was to estimate the incidence of breast and cervical intraepithelial lesions in Iran.

**Methods:** This study was based on results from a screening program implemented in the province of Isfahan, Iran. **Methods:** Two stages of cancer screening were performed in the study on over 290000 women in 2022.

**Results:** As a result of this study, it was determined that in 2022, there was an incidence of 486 benign breast tumors per 100 000 women (95% CI: 393-450). Also, the incidence of breast cancer was 73 (95% CI: 59-84) per 100 000 women, and that of Cervical intraepithelial lesions was 54 (95% CI: 34-73) per 100 000 women in 2022.

**Conclusions:** This study revealed that breast cancer and cervical intraepithelial lesions are increasing in Isfahan province. Moreover, it was found that screening for these two cancers leads to early detection of patients, which results in early treatment and an increase in the 5-years survival rate in these patients.

**Keywords:** Breast•Cervix•Incidence•Screening



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O-1025

## End-of-life care in children with cancer: a review article

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### Abstract

**Background :** Cancer is one of the most important chronic diseases of children in the world, which leads to the death of a significant number of them every year. End-of-life care can help the child and his family to cope with the final stages of life and accept death. This study was conducted with the aim of investigating end-of-life care in children with cancer by reviewing previous studies.

**Materials and Methods :** In this systematic review, the key words of end-of-life care, cancer, children with cancer and their English equivalents were searched in the period of 2000-2022 in various reliable databases such as SID, Magiran, Google scholar, Pubmed, Scopus . Finally, articles unrelated to the purpose of the study, articles without full access, letters to the editor, and articles that were incomplete or in the form of posters and speeches. were excluded and 18 articles were reviewed.

**Results :** After a detailed and targeted study of the articles, end-of-life care in children with cancer was analyzed and classified in different cases: a: the state of providing end-of-life care in children with cancer and b: care factors for providing end-of-life care in children with cancer, the factors of which are parents' attitude towards end-of-life care, parents' awareness of end-of-life care, parents' financial status, characteristics of the care hospital, parents' psychological and emotional status, child's clinical status.

**Conclusion :** End-of-life care is a simple and efficient care approach in caring for children with cancer in the final phase of life, which can help the child and family to deal with the conditions before and after death. Therefore, conducting more clinical studies, culturalization and development of investment in this field is necessary and essential, especially in Iran.

**Keywords:** end-of-life care·cancer·children with cancer



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O-1165

## In Vitro and In Vivo Assay Toward a Promising Cancer Treatment Approach by Adoptive Cell Therapy

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### Abstract

Adoptive cell therapy (ACT) is that involves extracting a patient's immune cells, modifying them to recognize and attack cancer cells, and then reinfusing them into the patient. Preclinical models are essential for evaluating the safety and efficacy of ACT before clinical trials. Cell lines are established cultures of cancer cells that can be easily manipulated and expanded in the laboratory. They are a readily available and cost-effective tool for studying the basic functions of CAR T cells, such as their ability to bind to cancer cells, produce cytokines, and kill tumor cells. However, cell lines often lack the complex tumor microenvironment (TME) found in vivo, which can limit their predictive value. Primary cultures are cultures derived directly from patient tumors. They offer a more realistic representation of the TME than cell lines, but they are more challenging to work with and may not be available for all patients. The cells involve implanting tumor pieces or cells directly from a patient into immunocompromised mice. Patient-derived xenograft (PDX) models provide the most realistic representation of the patient's tumor and TME, but they are also the most expensive and time-consuming to generate. The choice of preclinical model depends on the specific research question being addressed. In vitro models are useful for studying the basic functions of CAR T cells, while in vivo models are necessary for evaluating their safety and efficacy in a living organism. As the field of ACT continues to evolve, new and improved preclinical models are being developed to better predict clinical outcomes. Synthetic biology plays a growing role in ACT design (new receptors, genetic circuits, etc.). While not strictly a "preclinical model" tool, it's valuable to mention this. It might elaborate slightly more on what makes cell-based models unique, particularly as researchers attempt to better model complex tumor-immune system interactions. Different models have varying costs, complexity, and translational relevance. Choosing the right model depends on the specific research question and stage of ACT development. It would be helpful to briefly outline the main limitations of cell-line xenografts, humanized mice, and PDX models. This reinforces the concept that no single model is perfect. The field of ACT preclinical models is rapidly changing and standards for evaluating and comparing models are still evolving.

**Keywords:** Cell Therapy, In Vitro, In Vivo



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O-1021

## Comparison of a healthy lifestyle in the prevention of breast cancer from the perspective of Persian and modern medicine

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### Abstract

Breast cancer is one of the most common and deadly cancers among women which imposes heavy medical costs. Recurrence, side effects and lack of a clear preventive plan as well as an increasing incidence are other related concerns. The purpose of this study is to review prevention of breast cancer in Persian medicine compared to conventional medicine. This review research was carried out for the last 21 years (2001-2022) using specific key words related to the prevention of breast cancer, and then compared to the most famous Persian medicine manuscripts in this context .

Persian medicine (PM) has special views on the preventive plans by introducing risk factors of diseases. Some known risk factors of breast cancer in PM, are constipation, obesity, menses retention, irregular night sleep, low physical exertion and improper diet. Proven risk factors of breast cancer including improper lifestyle, western diet, obesity, physical inactivity, delayed childbearing, fewer children, and shorter duration of breastfeeding are in line with PM evidences.

The results of comparing the healthy lifestyle in preventing breast cancer from the perspective of Persian and modern medicine and new research were the same. Increased exposure to estrogen is associated with an increased risk of breast cancer. Moderate exercise, breastfeeding, and factors that reduce the number of menstrual cycles have a protective effect. The final differentiation of breast cells associated with the completion of the gestation period also has a protective effect.

There is a link between obesity and an increased risk of breast cancer. Since most estrogen in postmenopausal women is converted from androstenedione to estrogen by adipose tissue, obesity is associated with a long-term increase in estrogen exposure. Long-term consumption of high-fat foods increases the risk of breast cancer by increasing serum estrogen levels.

Considering the importance of disease prevention from the perspective of Persian medicine, it seems that providing the right lifestyle and introducing six essential principles for maintaining health from the perspective of this medical school can play an important role in preventing breast diseases.

**Keywords:** Breast cancer, Persian medicine, prevention, Risk factors



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O-1093

## The Effect of Psychological Interventions on Resilience Among Cancer Patients: systematic review

Shirin sadat Akhzari - Fatemeh Dehghani

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### Abstract

مقدمه: سرطان یکی از بیماری های تهدید کننده حیات است. با توجه به اینکه تشخیص سرطان و درمان آن، موجب بروز مشکلات هیجانی و عاطفی عمیق نظیر اضطراب، افسردگی شدید، غم، ناامیدی، عصبانیت و فقدان کنترل و عدم امنیت در بیمار و خانواده وی میگردد و اینکه، تاب آوری یک عامل حمایتی مهم در این افراد است و از سوی دیگر بیماران مبتلا به سرطان علاوه بر مداخله و حمایت های پزشکی و دارویی، به مداخله روانشناختی نیز نیاز دارند، پژوهش حاضر با هدف شناسایی تاثیر مداخلات روان شناختی بر تاب آوری بیماران مبتلا به سرطان با مروری بر مطالعات گذشته انجام گردید.

روش کار: مطالعه حاضر یک مطالعه مرور سیستماتیک است. جستجو با استفاده از کلید واژه های تاب آوری، سرطان، مداخله روان شناختی در پایگاه های اطلاعاتی مگیران، اسکوپوس، اس آی دی، پابمد، گوگل اسکولار انجام شد. در نهایت مقالات منتشر شده در سالهای ۲۰۱۲ تا ۲۰۲۲ با در نظر گرفتن معیار های ورود و خروج مورد بررسی قرار گرفتند.

یافته ها: نتایج بررسی مطالعات نشان داد، مداخلات روان شناختی اعم از درمان هیجان مدار، آموزش ذهن آگاهی، برنامه های آموزشی، طرح واره درمانی، گروه درمانی و ... با تاثیر بر آگاهی و عملکرد شناختی، بهزیستی روان شناختی و پذیرش هیجانات، افزایش خلق و عملکرد فیزیکی بر بهبود تاب آوری افراد مبتلا به سرطان موثر می باشد. نهایتاً نتایج نشان از موفقیت آمیز بودن مداخلات روان شناختی بر تاب آوری بیماران مبتلا به سرطان داشت.

نتیجه گیری: در مجموع میتوان از مداخلات روان شناختی به منظور بهبود تاب آوری بیماران مبتلا به سرطان به عنوان رویکرد موفق بهره برد. شایان به ذکر است که توجه به مداخلات روان شناختی به طور جدی تر و گسترده تر در سطح بیمارستان ها و مراکز حمایت کننده از افراد مبتلا به سرطان نیازمند است.

**Keywords:** سرطان، تاب آوری، مداخله روان شناختی



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O-1139

## The Geographical Spread of Registered Cancers Based on The Population in Sabzevar University of Medical Sciences 2014-2017

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Sabzevar University of Medical Sciences - Sabzevar University of Medical Sciences - Sabzevar University of Medical Sciences - Shahid Beheshti University of Medical Sciences - Sabzevar University of Medical Sciences - Sabzevar University of Medical Science

### Abstract

**Background:** Cancers are part of non-communicable diseases that are caused by many reasons and are one of the most common causes of death in today's world. The diversity and spread of cancers are different in different geographical regions of the world. This study was conducted to investigate the geographical spread of registered cancers based on the population within Sabzevar University of Medical Sciences from 2014-2017.

**Methods:** This cross-sectional descriptive-analytical study was conducted by examining the final report of the data recorded in the national cancer registration system. In this research, 2649 registered patients were evaluated during 2014-2017. The most important factors investigated include the registration of cancers based on the affected organ, gender, and age group of patients, cancer grades, and diagnosis method.

**Results:** The results of this study showed that skin, lung, breast, stomach, and colorectal cancers with a total of about 48% of all cancers in each year had the highest statistics in these years, but the order of the most common ones was different in each year. 47.2% of patients were women and 52.8% were men, and the largest age group of patients is 60-79 years old. 20.4% of the cases were in grades 2 and 3 at the diagnosis time. The diagnosis method in 56.5% of patients was based on pathology, 23.9% was based on the death certificate and 18.6% was clinical. 63.7% of cases were reported by Sabzevar University, 30.2% by Mashhad University, and the rest by other universities.

**Conclusion:** Paying attention to the affected member and the age range of cancer prevalence in planning should be considered an important priority to predict their screening and control measures. The reason for the referral of patients with high grades of cancer needs further investigation and necessary intervention. Also, reporting a significant percentage of cancer cases by other universities makes it more necessary to pay special attention to the existence of an integrated and coherent system to improve more than before the registration and reporting of cancers.

**Keywords:** Epidemiology, Cancer Registry, Sabzevar University of Medical Sciences, Breast Cancer, Sabzevar



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O-1113

## CAR T-cell Based Gene Therapy For Cancer: new perspectives and challenges systematic review

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دانشگاه آزاد اسلامی واحد مشهد

### Abstract

**Background:** In this review, we briefly discussed cancer immunotherapy, the genetic engineering of T cells In detail, and the current innovations in CAR T-cell strategies in hematologic malignancies. Furthermore, we also discussed the current challenges in CAR T-cell therapy. CAR-T cell therapy is a novel and rapidly evolving cellular immunotherapy that has achieved significant long-term durable remission in cancer patients compared to traditional cancer therapies.

**Methods:** this study was a review study that conducted by using Screening title/abstract and full manuscript in PubMed database. Finally 15 out of 384 results were examined in detail. These studies were published between 2000 and 2023.

**Results:** development and employment of new treatment concepts have been initiated to further improve overall survival and reduce cancer burden, while inducing lower systemic toxicity. One of them was immunotherapy, which uses antibodies, cytokines, and immune cells to modulate the host immune response to cancer. Chimeric antigen receptor T (CAR-T) cell therapy is regarded as an effective solution for relapsed or refractory tumors, particularly for hematological malignancies. These strategies are based on the infusion of lymphocytes, usually autologous T cells, to fight disease in patients. By selecting or modifying the lymphocytes' specificity towards a target antigen, they are expanded and injected back into the patient, where they exert their cytotoxic activity and help to mount a sustained immune response against it. CAR T cells are T lymphocytes genetically modified with an appropriate DNA construct, which endows them with expression of a CAR, a fusion protein between a ligand-specific recognition domain, often an antibody-like structure, and the activating signaling domain of the T cell receptor. Activated CAR T cells secrete cytokines, such as IL-2, IL-6, and IFN- $\gamma$ , that recruit and potentiate the action of other immune cells, like NK cells, macrophages, and other T cells, orchestrating a more robust tumor-suppressive environment. CAR-T cells with flaws in CAR design and functional defects may reduce anti-tumor efficacy and durable remission. CAR-transduced T lymphocytes, especially anti CD19-CAR T cells, have displayed impressive efficacy in patients with B cell malignancies, such as chronic lymphocytic leukemia (CLL), acute lymphoblastic leukemia (ALL), particularly relapsed/refractory B-ALL, non-Hodgkin lymphoma (NHL), and multiple myeloma(MM). Despite the relative effectiveness of transduced CAR T cells in patients with hematological malignancies, it fails to enable marked anti-tumor response in the treatment of solid tumors.

**Conclusions:** CAR-T cells are the best-in-class example of genetic engineering of T cells, bringing us spectacular opportunities and hopefully entering the mainstream of cancer therapy for B cell



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malignancies in the next 1–2 years. Following CAR-modified T cells striking success in hematological malignancies, they have been proposed as a novel curative strategy in solid tumors. It has encountered challenges such as lymphocyte penetration into the tumor tissue or exhaustion by the immunosuppressive tumor milieu. Many challenges remain, however, as we strive to make remissions induced by this therapy durable for all treated patients.

**Keywords:** car t-cell·car t-cell therapy·immunotherapy·hematological malignancy



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شمال

O-1135

## Anticancer Activity of an enzymatic hydrolysate from *Chlorella vulgaris* on Mouse colon cancer cells

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### Abstract

**Background:** Cancer is one of the major causes of mortality in the globe. A number of drugs were derived from natural sources such as plants and microorganisms against various different types of cancer. *Chlorella* is a unicellular green alga found in fresh and marine water and is widely used as a food supplement. *Chlorella vulgaris* protein hydrolysate (CVPH) was tested after being hydrolyzed by pepsin as a gastrointestinal protease.

**Methods:** The cytotoxic effect on the CT-26 cell line was evaluated using the MTT assay.

**Results:** The results of toxicity assays showed that the survival rate of the cells was decreased by increasing the concentrations of the peptides (62.5, 125, 250, 500, and 1000 µg/ml). Peptides of <3 kDa molecular weight had a substantial impact on the viability of murine colon cancer cells with an IC50 value of 435 µg/ml.

**Conclusions:** The results of the present study showed that the *Chlorella vulgaris* hydrolysates protein obtained showed anti-cancer activities against the murine colon cancer (CT-26) cell line.

**Keywords:** Peptides, Enzymatic hydrolysate, Anticancer activity, Colon cancer, *Chlorella vulgaris*



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O-1126

## The effect of Yoga and the influence of fatigue on walking, physical activity and quality of life among cancer survivors in Tehran cancer treatment centers

Seyedeh hengameh Vahabi - Amir mohammad Arefpour

دانشگاه آزاد واحد کرج - دانشگاه علوم پزشکی ایران

### Abstract

(بازماندگان تأثیر QoL) و کیفیت زندگی (PA) بر راه رفتن، فعالیت بدنی (CRF) زمینه و هدف: خستگی مرتبط با سرطان (است. با این حال، شواهدی از آزمایش‌های بالینی بزرگ در مورد CRF منفی می‌گذارد. یوگا یک درمان موثر برای درمان و کیفیت زندگی بازماندگان تأثیر PA با راه رفتن، مشارکت در CRF از طریق یوگا بر تداخل CRF اینکه چگونه کاهش، و کیفیت زندگی در بین بازماندگان PA را بر راه رفتن، CRF می‌گذارد، در دسترس نیست. ما اثرات یوگا و تأثیر واسطه‌ای (با سرطان در یک کارآزمایی تصادفی‌سازی و کنترل‌شده بررسی کردیم. بیماران و روش‌ها: بازماندگان سرطان (n=410) بی‌خواهی ۲ تا ۲۴ ماه پس از درمان به‌طور تصادفی به دو گروه مداخله یوگا ۴ هفته‌ای - یوگا برای بازماندگان سرطان و کیفیت PA با راه رفتن، CRF) و گروه کنترل تقسیم شدند. از یک لیست علائم برای ارزیابی میزان تداخل YOCAS) استفاده شد. برای بررسی CRF زندگی بازماندگان استفاده شد. پرسشنامه علائم خستگی چند بعدی-فرم کوتاه برای ارزیابی زوجی و تحلیل کوواریانس استفاده شد. تجزیه و تحلیل داده‌ها برای تفاوت‌های درون‌گروهی و بین‌گروهی از آزمون و کیفیت زندگی در بین بازماندگان استفاده PA با راه رفتن، CRF و تغییرات در تداخل CRF ارزیابی روابط میانجی بین با راه CRF بهبود قابل‌توجهی در تداخل YOCAS شد. نتایج: در مقایسه با کنترل‌های مراقبت استاندارد، شرکت‌کنندگان ناشی از یوگا بخش CRF). بهبود در  $P \leq 0.05$  و کیفیت زندگی پس از مداخله گزارش کردند (اندازه اثر =  $0.33$ ؛ PA رفتن، (اختصاص داد. نتیجه‌گیری:  $P \leq 0.05$  (۵۳٪)، و کیفیت زندگی (۴۵٪؛ PA قابل توجهی از بهبودها را در راه رفتن (۴۴٪)، و کیفیت زندگی به دلیل بهبود PA با راه رفتن، CRF بر تداخل YOCAS بخش قابل‌توجهی (۴۴ تا ۵۳ درصد) از تأثیر در بین بازماندگان سرطان بود. یوگا باید به عنوان یک گزینه درمانی برای بازماندگانی که دچار خستگی هستند معرفی CRF و کیفیت زندگی خود را بهبود می‌بخشد. PA و گنجانده شود. با کاهش خستگی، بازماندگان راه رفتن، مشارکت در

**Keywords:** یوگا، خستگی، فعالیت بدنی، کیفیت زندگی



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O-1212

## Unleashing the Therapeutic Potential of Gene-Driven Drug Combinations for Hepatocellular Carcinoma: A Graph Neural Network Under RAIN Protocol

Shiva Karimian - Mahnaz Boush - Ali Kiaei

### Abstract

vahidi

Keywords: vahidi•vahidi•vahidi



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O-1171

## Prediction in protein-protein interaction networks in BRCA1, cancer cell using Ensemble method

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### Abstract

Protein-protein interaction (PPI) occurs as a result of high-specificity physical contacts between two or more protein molecules and causes biochemical events driven by interactions that include electrostatic forces, hydrogen bonding, and hydrophobic effects. On the other hand, protein interaction Protein plays a key role in predicting the target protein-protein function and the medicinal ability of molecules. The description and knowledge of protein-protein interaction networks helps a lot in the analysis of signal transduction pathways. all of which can lead to the construction of networks that predict all. Currently, knowing the function of the undiscovered protein-protein interaction (PPI) is one of the key issues for the development and progress of modern systems biology. With full knowledge and understanding of protein-protein interaction, it is possible to enter the bioinformatics science through which to predict possible links to find treatment methods, drug therapy, prognosis of chronic diseases, such as cancer, etc., both now and in the future Future tense earned. Considering that the main goal of this research is to extract the necessary knowledge from past experiences and/or find patterns in the data, therefore, we do this by machine learning, ML. so that, thereby, the algorithms perform the prediction process among the links. Since the structural knowledge of protein-protein interaction (PPI) relationships shows efficient information about kinetics, thermodynamics and molecular functions in the complex and defines its role in diseases. As far as it is possible to understand complex protein-protein<sup>o</sup>structures, <sup>o</sup>machine learning methods can be used. To discover these relationships, since the use of a basic method in machine learning can have a lower accuracy compared to our expectation level, therefore, the combined method of machine learning (Ensemble) with the Bagging method and the combination of two basic algorithms, Decision Tree and Random forest We used it by accident. The reason for using the Bagging algorithm is that the Bagging technique in machine learning, Bagging, provides information about the types of Bagging algorithms. Bagging is a powerful technique that helps reduce variance, which in turn prevents overfitting. Ensemble methods improve model accuracy by using a group of models. Which, when combined, work better than separate models when used separately. Taking the help of machine learning methods, instead of blindly examining all possible links, we can better find predictions based on the observed links and better focus on the links that are most likely to exist. The selected protein in this study is (BRCA1), which has eleven relationships with other proteins (TOPBP1-BABAM1-BABAM2-BARD1-BRCA1-MRE11-BRIP1-TP53-PALB2-FANCD2-ATM) and was selected from the STRING database. The purpose of this research is to increase the accuracy of the research to 100%, the implementation time (0 seconds), without any errors and the average error is 0.005,



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using the ensemble algorithm method. Also, the results of this study show that the use of Ensemble algorithm methods on methods of treating the disease. However, due to the experimental delay in solving abase data can be doctor's help in designing diagnostic and treatment process systems doctors help in designing diagnostic and treatment process systems.

**Keywords:** protein-protein<sup>o</sup> interaction, machine learning, cancer, BRCA1, Bagging method



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O-1192

## Physical activity and cancer prevention

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دانشگاه شمال

### Abstract

Physical activity and cancer prevention

**Keywords:** prevention, Physical activity, cancer



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O-1181

## New drug delivery systems in cancer treatment

Abbas Pardakhti

دانشگاه علوم پزشکی کرمان

### **Abstract**

New drug delivery systems in cancer treatment

**Keywords:** drug delivery system, cancer treatment, signaling



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O-1042

## Evaluating clinical and pathological characteristics related to colorectal cancer patients' survival rate by survival tree analysis

Sepideh Arjomand Kermani - Sajjاده Movahedinia - Mohammad Reza Baneshi - Abbas Bahrapour

دانشگاه علوم پزشکی کرمان

### Abstract

Nowadays, cancer has become one of the most common causes of death worldwide, and the uncontrolled growth and diversity of cancer cells have been identified as one of the most important causes of cancer death. There is a type of cancer called colorectal cancer (CRC) that occurs in the colon, rectum, or appendix when cells continue to grow and increase uncontrollably. Colorectal cancer is the third most prevalent cancer in the world, and there is a steady increase in its incidence in developing countries. Several factors contribute to the growth of colorectal cancer, including obesity, sedentary lifestyles, red meat consumption, alcohol consumption, and smoking. There are a number of side effects associated with colorectal cancer, and these side effects adversely impact a patient's quality of life and compliance with treatment. Identifying risk factors to treat and prepare patients for colorectal cancer is important and could be helpful. In this study, the data of 821 colorectal cancer patients were obtained from Kerman Population-Based Cancer Registry, Shafa hospital, Afzalipour hospital, and Javad-ol-Aeme clinic in Kerman province. This study determined the relationship between a set of clinical and pathological characteristics of colorectal cancer patients, such as tumor size, total lymph node, primary tumor extension, regional lymph node status, lymph node involvement, tumor stage, lymphovascular invasion, perineural invasion, histological grade, histologic type, and tumor site, gender, and age at the time of diagnosis, and survival time by use of survival tree analysis. Survival tree aims to classify patients with the greatest similarity within groups and the least similarity between groups in terms of survival rate. Several advantages of tree models over regression methods exist, including the ability to reveal high-order interactions between independent variables, the use of surrogate variables to handle missing data, and the provision of an easy visual tool for clinical decision-making. The mean and standard deviation of the age at diagnosis for patients who died and those who survived were  $64.7 \pm 14.2$  and  $60.9 \pm 14.2$  years, respectively. Approximately 35 months have been estimated to be the median survival time after diagnosing this disease. This study found that the following variables are associated with colorectal cancer patients' survival time, such as age at diagnosis, stage, total lymph node, tumor site, and histological grade. There is a low survival rate for individuals whose histological grade is poorly differentiated or undifferentiated, the amount of lymph brought is less than 10, the tumor site is located in the right colon or colon (not specified), their cancer stage is 3 or 4, and their age at diagnosis is greater than 79.5 years. There is a higher survival rate for people who had more than ten total lymph nodes, who were in stage I or II of their disease, and who were over seventy-nine years of age at the time that their disease was identified. The purpose of this study was to propose several variables that would assist physicians in making



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informed decisions about how to control and treat colorectal cancer by identifying risk factors that affect survival time after diagnosis.

**Keywords:** Survival tree•Colorectal cancer•Kerman•pathological characteristics•patient



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O-1180

## An intervention to support of end-of-life caregivers

Rebecca Lehto

Michigan State University | MSU · College of Nursing

### **Abstract**

an intervention to support of end-of-life caregivers

**Keywords:** Clinical trial, end of life, caregivers



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O-1079

## Treatment Outcomes and Prognostic Factors in Pediatric Non-brainstem Astrocytoma in North East of Iran

Seyede mozhgan Heidari

دانشگاه علوم پزشکی مشهد

### Abstract

**Background:** Central Nervous System (CNS) tumors have accounted for approximately one fourth of all pediatric malignancies. CNS tumors have been the most common solid malignancies among the children. In this study, we have evaluated survival and prognostic factors in children with non-brain stem astrocytoma.

**Methods:** Children with non-brain stem astrocytoma, referring to radiation oncology centers of Ghaem and Omid hospitals of Mashhad, have included in this retrospective study, in years 2000-2010. Patients' demographic data, past medical history, clinical symptoms, extent of tumor resection and treatment modality have recorded. Disease-free survival and overall survival have measured using Kaplan-Meier method.

**Results:** We studied 87 patients with male to female ratio of 44/43 (1.02), and median age of 10 yrs (range: 2-15 yrs). Tumor grade distribution was as follows: grade I: 20 (23%) subjects; grade II: 34 (39.1%) subjects; grade III: 20 (23%) subjects; and grade IV: 13 (14.9%) subjects. The median follow-up duration was 38 months (6 to 110), and 16 months (4 to 100) for patients with low- and high-grade tumors. The 2-year survival rates in grades I-IV were 100%, 84.7%, 60% and 10.8%, respectively. Tumor resection less than gross total and non-ambulation have associated with a significantly inferior survival in both groups multivariate analysis, with high- and low-grade tumors.

**Conclusion:** For all the cases of the pediatric non-brainstem astrocytoma, tumor grade had dramatic influences on their survival. Performing gross total resection was crucial for achieving favorable outcomes in both low-grade and high-grade cases. Moreover, according to the results, having major motor deficits has associated with lower survival.

**Keywords:** Pediatric, Non-brain stem, Astrocytoma



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O-1199

## Cancer and human papilloma virus

Hossein Ashrafi

دانشگاه کینگستون

### **Abstract**

Cancer and human papilloma virus

**Keywords:** Cancer, human papilloma virus, research



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O-1208

## Powerful techniques of artificial intelligence in the discovery of cancer biomarkers

Hamid Alinejad

UNSW

### Abstract

Powerful techniques of artificial intelligence in the discovery of cancer biomarkers

Keywords: artificial intelligence, biomarkers, cancer



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O-1211

## Designing, and Evaluating of Recombinant Human Keratinocyte Growth Factor (rhKGF) Variants with Reduced Aggregation Propensity

Hamzeh Rahimi

Texas Biomedical Research Institute

### Abstract

This study focuses on reducing the aggregation tendency of recombinant human keratinocyte growth factor (rhKGF), a therapeutic protein prone to aggregation. Initially, 21 mutants were designed based on identified aggregation-prone regions (APRs). Four mutants, including No. 4 (L91K, I119K), 7 (V13S, L91K), 14 (L91D, I119D), and 21 (A51E), were selected for further analysis based on molecular dynamics simulations. Experimental studies examined secondary structure, thermal stability, aggregation propensity, and biological activity. The mutants exhibited similar secondary structures to rhKGF, with the A51E mutant demonstrating improved stability and reduced aggregation under heat stress, suggesting potential for reduced aggregation propensity.

**Keywords:** Recombinant Human Keratinocyte Growth Factor, molecular dynamics simulations, rhKGF Variants, molecular dynamics simulations, thermal stability, aggregation propensity, biological activity



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P-1004

## Prevention and screening colorectal cancer in elderly: A systematic review

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### **Abstract**

**Background:** The aim of this study was to describe the knowledge, attitudes, and practices toward colorectal cancer prevention and screening in elderly. More than half of colorectal cancers occur in patients older than 75 years. This group is not homogeneous but variably vulnerable to disease, diagnostics, treatment procedures and complications. CRC is a common and preventable malignancy, and routine CRC screening is recommended for average risk individuals between the ages of 50 and 75 years. Prevention is the main strategy in order to reduce colorectal cancer incidence and mortality. It can be accomplished through primary prevention, using measures affecting factors known to confer higher risk of colorectal cancer, or through secondary prevention, aimed at early diagnosis of cancer or preneoplastic lesions in groups of subjects at increased risk of cancer. Colorectal cancer and precancerous adenomas disproportionately affect the elderly, necessitating the need for screening and surveillance in this group. However, screening and surveillance decisions in the elderly can be challenging. Special considerations such as comorbid medical conditions, functional status, and cognitive ability play a role in one's decisions regarding the utility of screening and surveillance as well as the success and safety of various screening modalities. This article explores the evidence for screening and surveillance in the elderly, and addresses key challenges unique to this population.

**Methods:** A survey was carried out based on a selection of the relevant literature. In this systematic review, four online databases (PubMed, Scopus, web of Science, ProQuest) from related articles from 2017-2021 were searched for related keywords. The quality of articles was evaluated using the Newcastle-Ottawa (NOS) criterion.

**Results:** The number of publications is now rapidly increasing, and even now it is becoming apparent that the assessment of the elderly for the prevention and screening of colorectal cancers better predicts treatment-related side effects and their economic costs and psychological and quality of life. And enable more individual assessment of symptoms for surgical and pharmacological diagnosis and screening.

**Conclusion:** This review highlights the age-specific aspects of diagnostics, prevention and screening, in geriatric. primary prevention should be the goal for future years, because it acts on the probable causes of colorectal cancer, at present it seems that secondary prevention is more effective on colorectal cancer survival, and the approaches which have yielded the most satisfying results, in terms of reduced mortality for cancer, are those aimed at detecting preneoplastic lesions, or cancer at an early stage in selected groups of subjects at average or increased risk of colorectal cancer. These groups are subjects aged 50 years or older, affected individuals (gene carriers) or



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family members of hereditary colorectal cancer syndromes (i.e., Lynch syndrome and familial adenomatous polyposis), and patients with inflammatory bowel diseases. The most effective procedures used, though with some drawbacks, are fecal occult blood tests and colonoscopy. Future research should be addressed to find new approaches that will render preventive strategies more acceptable for the population, and more cost-effective.

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Disclosure: All authors have declared no conflicts of interest

**Keywords:** prevention & screening, elderly, colorectal cancer



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P-1019

## Investigating the Effects of Tele-Nursing Care on Individuals with Cancer: A Systematic Review

Amir Hossein Shafighi - Mohaddeseh Peyvastegar - Fatemeh Ashouri - Arezoo Kordian - Maryam Aziznia

دانشگاه علوم پزشکی شهید بهشتی

### Abstract

**Introduction:** Cancer, as a non-communicable, chronic and recurring disease, is the result of the uncontrollable reproduction and growth of abnormal cells. Cancer is associated with many considerable consequences on all aspects of human life. Moreover, it is recognized as one of the main causes of death universally. So far, numerous care or cure approaches have been introduced and implemented in order to deal with cancer. Along with the increasing progress of technology, novel approaches of cancer care or cure have been presented, the most important of which are tele-health or tele-nursing care services. Tele-nursing is defined as the provision of health care using information technology, when there is a physical distance between the patient and the nurse. Tele-nursing is used in order to enhance the educational, care and symptom management strategies for chronic diseases such as hypertension. Due to the existence of significant limitations in financial, human, hospital and infrastructure resources in providing long-term care to individuals with cancer, tele-nursing care can be a suitable compensation for the mentioned limitations. Therefore, the present study was implemented aiming to “determining the effects of tele-nursing care on individuals with cancer.”

**Method:** The present study was conducted by reviewing the published and available “Persian” and “English” sources in databases of “Magiran”, “Irandoc”, “SID”, “MEDLINE”, “Cochrane Library”, “ScienceDirect”, “PubMed” and “Google Scholar”, between 2018 to 2022. Accordingly, the searching process was conducted using the keywords of “Nursing”, “Nurse”, “Cancer”, “Malignancy”, “Neoplasm”, “Tele-nursing” and eventually “Tele-health”. Ultimately, among the 168 initial articles, 25 articles were selected and analyzed.

**Results:** Based on the reviewed studies, tele-nursing care for individuals with various types of cancers contains providing services in three general levels of education, care and management of cancer symptoms. The mentioned measures were “virtual monitoring”, “medication management”, “sympathy and relieving suffering”, “providing emergency services”, “managing long-term symptoms”, and finally, “specialized care”. Accordingly, such services are often provided through phone calls, video calls, mobile phone or personal computer based softwares, and eventually, educational content in the form of educational audio-visual files. It is necessary to indicate that the implemented measures have had significant consequences for individuals suffering from various types of cancer, their personal caregivers and finally health care providers such as nurses. In addition, the aforementioned services have had higher simplicity and safety compared to the



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traditional approaches. Following the use of tele-nursing, clients were able to communicate with their nurses at any time, any place. Besides, the principle of “privacy” has received more attention. Further, tele-nursing care had brought significant reduction in care and treatment costs, alongside the re-hospitalization mitigation. Another advantage was the extensiveness of such service compared to traditional approaches. Following such services, more individuals had benefited from nursing care, and concurrently, more convenience had been provided for health care providers. Ultimately, following the enhancement of the clients' self-management and self-confidence, their tendency and cooperation for such new services had become much more than the traditional approaches.

#### Conclusion:

Based on the findings, tele-nursing care has had numerous outstanding consequences among individuals with cancer, their personal caregivers and as well, the health care providers such as nurses.

#### Recommendations:

Considering the mentioned significant consequences of such an approach, along with the increasing global growth of information technology, paying further attention to tele-health and tele-nursing approaches is indispensable. Hence, implementing the necessary measures in order to outstretch such approaches in Iran is recommended.

**Keywords:** Cancer, Nursing, Tele-nursing, Tele-health, Health



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P-1091

## Metabolic Syndrome and Risk of Colorectal Cancer: A Case-Control Study

Hosein Azizi - Elham Davtalab Esmaeili

علوم پزشکی تبریز

### Abstract

**Background:** Among Middle East countries, the prevalence of Metabolic Syndrome (MetS) and Type 2 Diabetes Mellitus (T2DM) dramatically increased in Iran. Very few evidence-based studies have been performed on the relationship between metabolic disorders and colorectal cancer (CRC) in developing countries at least in Iran.

**Objectives:** This case-control study aimed to determine the relationship between MetS and CRC risk.

**Methods:** A case-control study with 414 participants (207 cases and 207 controls) was conducted among referral hospitals (Imam Reza, Shahid Madani, and Sina) in Tabriz, Azerbaijan province, Iran. Cases with CRC confirmed by positive pathology and colonoscopy findings were selected and compared with the controls without neoplastic and chronic diseases at the same time and hospitals for the cases. Group matching was used based on sex and age variables for the case and control groups. MetS was defined by the International Diabetes Federation (IDF) criteria. Multiple logistic regression was used to estimate adjusted odds ratios for the association between MetS and odds of CRC.

**Results:** Out of 414 participants, 220 (53%) were men. Among the cases, 134 (64.73%) patients had MetS, while in the control group, 82 individuals (39.61) had MetS history. After adjusting for the confounders, MetS and DM history were significantly associated with elevated odds of CRC (OR: 2.79, %95 CI: 1.58 - 5.15, P = 0.001) and (OR: 2.57, %95 CI: 1.25 - 4.58, P = 0.006), respectively. We have observed also a dose-response relation and a trend between the components of MetS and CRC risk. So, the odds of CRC increased by rising numbers of MetS components.

**Conclusions:** It seems that MetS and its components are associated with an increased risk of CRC.

**Keywords:** Colorectal Cancer, Metabolic Syndrome



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P-1096

## Experiences of women with breast cancer and their husbands From the wife's unsupportive behavior: A mixed method content analysis study :A mixed method content analysis study

Elham Rasoulia

دانشگاه علوم پزشکی شهید بهشتی

### Abstract

**Introduction:** non-supportive responses of relatives, especially the wife, play an important role in the psychological adjustment of breast cancer patients and their spouses Failure to meet the physical and psychological needs of breast cancer patients and their spouses can lead to anxiety and depression and marital problems.

**Objective:** To determine the experiences of women with breast cancer and their wives From the wife's unsupportive behavior.

**Research method:** The current research is a combined study with an explanatory approach. The first part of the study was a quantitative study conducted in the educational and therapeutic centers of Martyr Qazi Tabatabai and Martyr Madani in Tabriz. In the first part, a cross-sectional study aimed at determining non-supportive behaviors of women with breast cancer and their wives and related factors were carried out on it. In the second part, a qualitative study aimed at explaining the experiences of women with breast cancer and their husbands It was done because of the unsupportive behavior of the wife. By using the purposeful sampling method, To explain the experiences of women with breast cancer, The wife's unsupportive behavior was discussed from the point of view of 9 women with breast cancer and 6 cases of the patients' husband. Data were collected using in-depth individual interviews and note-taking, and analysis was done using Van Manen's phenomenology.

**Findings:** The findings showed that the average perceived non-supportive behavior of women was higher than the average perceived non-supportive behavior of men, and this difference was statistically significant ( $P=0.003$ ). On the other hand, considering the cut-off point of 2.5 (median) for individual items and the cut-off point of 32.5 for all items, the average (standard error) (0.69) was 2.03, the t-test statistic was 2.95 and the degree of freedom was 438 ( $P=0.003$ ). The amount of perceived unsupportive behavior in women and husbands was equal to 22 (0.10) and 8 (3.6) respectively. Also, the results of the chi-square test (after confirming the Kekran and independent conditions and the randomness of the samples) showed that there is a statistically significant difference between the perceived non-supportive behavior of women and husbands ( $P=0.008$ ).

The analysis of qualitative data related to the experiences of women with breast cancer and their husbands led to the formation of 5 main themes in women and 2 main themes in their husbands, which include: financial poverty, emotional poverty and disintegration of life together, lack of



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existential value as a woman, partner's violence, wife's positive modeling of the treatment staff's supportive behavior; In women and in husbands of patients: coldness and freezing of women's life, partner violence; Was

Conclusion: Women perceive their husband's behavior as more unsupportive than their husband's perception of women's behavior. which expresses the need for the husband to pay more attention to the effect of his behavior on his wife, Also, talking about the problem by the couple is the biggest factor in understanding support. Health professionals should pay more attention and help men to cope with this disease and bear the suffering of their wives

**Keywords:** wife's unsupportive behaviors, Breast Cancer, Breast cancer experience



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P-1015

## Investigation of the Relationship between spirituality and Social support with mental health Iranian breast cancer Survivors

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### Abstract

Background: The aim of this study was to explore the protective role of social support and spirituality in the prevention of depression, anxiety, and fatigue severity. In a cross-sectional study, 305 women of breast cancer survivors were recruited in the study.

Methods: The participants answered a self-reported hospital anxiety and depression scale, fatigue severity scale (FSS), social support, and spiritual health questionnaires. The data were analyzed using a multiple linear regression model to estimate the adjusted regression coefficients.

Results: A greater proportion of patients had moderate depression (62.9%) and moderate anxiety (67.3%). The higher level of social support was significantly associated with a lesser degree of depression ( $\beta=-0.05$ ,  $p = .001$ ) and anxiety ( $\beta=-0.04$ ,  $p = .001$ ), but there was no association with the severity of fatigue score, while the association of spiritual health with depression and anxiety was not independently significant.

Conclusion: This study highlights the importance of perceived social support in the prevention of depression and anxiety.

**Keywords:** anxiety, depression, social support, spirituality, breast cancer, survivors



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P-1006

## The role of advance dressings in cancer treatment: a systematic review

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دانشگاه علوم پزشکی شهید بهشتی

### Abstract

**Background:** Advanced therapeutic dressings that take active part in wound healing to achieve rapid and complete healing of chronic wounds is of current research interest. There is a desire for novel strategies to achieve expeditious wound healing because of the enormous financial burden worldwide. This paper reviews the current state of wound healing and wound management products, with emphasis on the demand for more advanced forms of wound therapy and some of the current challenges and driving forces behind this demand. The paper reviews information mainly from peer-reviewed literature and other publicly available sources such as the US FDA. A major focus is the treatment of chronic wounds including amputations, diabetic and leg ulcers, pressure sores, and surgical and traumatic wounds (e.g., accidents and burns) where patient immunity is low and the risk of infections and complications are high. The main dressings include medicated moist dressings, tissue-engineered substitutes, biomaterials-based biological dressings, biological and naturally derived dressings, medicated sutures, and various combinations of the above classes. Finally, the review briefly discusses possible prospects of advanced wound healing including some of the emerging physical approaches such as hyperbaric oxygen, negative pressure wound therapy and laser wound healing, in routine clinical care.

**Materials and Methods:** In this systematic review and meta-analysis study, four online databases (PubMed, Scopus, web of Science, ProQuest) from related articles from 2017-2022 were searched for related keywords. The quality of articles was evaluated using the Newcastle-Ottawa (NOS) criterion. This study, comprising a systematic review and meta-analysis, was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement

**Results:** This systematic review and meta-analysis study summarised the available evidence on the effects associated with the advance dressing for wound healing process.

**Conclusions:** Advance dressing is a safe method for accelerating healing and lowering the infection rate of wounds. Its use in wound treatment is recommended provided it is applied under appropriate circumstances. We consider that, in wound patients, it can present a key point to accelerate the healing process and stop conversion of the cancer wounds.

**Keywords:** advance dressing, treatment, Nurse, cancer



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P-1035

## Toxicity Effect of, stressed fibroblasts resulted fluid, on rat breast cancer stem cells, in simulated conditions of tumor microenvironment

Seyed Mostafa Rahimi - Roghayeh Pourbagher - Kosar Nayeri - Moein Shirzad - Amrollah Mostafazadeh

علوم پزشکی بابل

### Abstract

مقدمه: سرطان یکی از کشندهترین بیماری‌ها در سراسر جهان محسوب می‌شود که از میزان بالایی از نرخ گرفتاری و مرگ و میر برخوردار است. شایعترین نوع سرطان، سرطان پستان است. با توجه به سرعت رشد انفجاری این بیماری، توسعه روش‌ها و ابزارهای جدید برای درمان موثر یا مهار عوارض شدید مرتبط با آن ضروری به نظر می‌رسد. منظور از پاسخ‌های استرس سلولی شرایطی است که سلول‌های تحت استرس تجربه می‌کنند. معمولاً در نتیجه چنین فرآیندهایی، سلول‌ها مجموعه‌ای از ویژگی‌ها از جمله ویژگی‌های محافظتی را اتخاذ می‌کنند که به طور بالقوه می‌توان انتظار داشت که، به نوعی به کار بستن این ویژگی‌ها، در جهت اهداف درمانی، بتواند در شکل‌دهی ابزارهای جدید کمک‌کننده باشد. محرومیت از سرم یک عامل استرس‌زا برای سلول‌ها است که می‌تواند، این نوع پاسخ‌ها را ایجاد کند. برای کشف این اثرات، مایع رویی فیبروبلاست‌های ثبت اختراع شده (است) جمع‌آوری و مورد مطالعه قرار گرفت. Healstar کشت شده بدون سرم به مدت ۱۶ ساعت (با عنوان® می‌تواند اثرات ضدسرطانی داشته باشد. در این مطالعه، اثرات محلول ذکر شده بر Healstar بررسی قبلی ما نشان داد که® زنده ماندن سلول‌ها در یک مدل طراحی شده از ریزمحیط تومور بررسی شد.

روش کار: به منظور انجام مرحله کشت سلول‌های مورد نیاز آماده‌گشتند. سلول‌های ایمنی طحال (اسپلنوسیت‌ها) از طحال رت‌ها استخراج شد. پس از خارج کردن سلول‌ها از بافت با استفاده از محیط کشت سلولی از طریق فلش‌اوت کردن، با استفاده از شیب غلظت فایکول، سلول‌های ایمنی جداسازی شدند. سلول‌های مزانشیمی از استخوان ران و استخوان تیپا استخراج شد. در شرایط استاندارد کشت سلولی برای تهیه سلول‌های مورد نیاز کشت داده (LA7) رده سلول‌های بنیادی سرطان سینه رت LA7 شد. برای ساخت مدل شبیه‌سازی شده تومور جامد، ۳ جمعیت سلولی، سلول‌های طحال، سلول‌های مزانشیمی و انجام شد. برای ارزیابی Healstar® داده شدند. تیمار ۲۴ ساعته سلول‌های هم‌کشتی شده، با (Co-culture) کشت هم‌زمان انجام‌گشت. برای انجام تحلیل‌های آماری این مطالعه از آنالیز واریانس یکطرفه MTT میزان زنده ماندن سلول‌ها، سنجش معنی‌دار در نظر گرفته شد  $p < 0.05$  استفاده شد. برای انجام این تجزیه و تحلیل‌ها، مقدار

به طور قابل توجهی Healstar®، LA7 نشان داد که پس از دوره کشت هم‌زمان، در سلول‌های MTT نتایج: داده‌های سنجش جالب توجه است که افزودن (محیط کامل) کاهش داده است DMEM+FBS قابلیت زنده ماندن را در مقایسه با همچنین Healstar® + FBS اثرات سیتوتوکسیک آن را مختل نکرد و Healstar® به محلول (FBS) سرم جنین گاوی به (0165/0=p) را در مقایسه با محیط کامل راکاهش دهد LA7 توانست به طور قابل توجهی میزان زنده ماندن سلول‌های به تنهایی بود، اگرچه این تفاوت از نظر آماری Healstar® بیشتر از Healstar®+FBS طور قابل توجهی، اثر سمیت در مقایسه با گروه محیط کامل نداشت. LA7 تغییر معنی‌داری در زنده ماندن سلول‌های DMEM معنی‌دار نبود. همچنین گروه در شرایط (LA7s) بر روی سلول‌های بنیادی سرطان سینه موش صحرایی Healstar® بر خلاف اثرات سمی محلول هم‌کشتی، میزان زنده‌مانی دو سلول دیگر در این مطالعه، شامل سلول‌های طحال و مزانشیمی تحت تأثیر این محلول با یا بدون FBS نگرفت.

قادر است بین سلول‌های طبیعی و بدخیم در ایجاد اثرات Healstar® نتیجه‌گیری: به طور کلی، یافته‌های ما نشان می‌دهد که سمی تمایز قائل شود. درحالی که اثرات سیتوتوکسیکی را بر سلول‌های بنیادی سرطان پستان تحمیل می‌کند، اثرات سمی مشابهی بر سلول‌های طبیعی از جمله سلول‌های ایمنی و سلول‌های مزانشیمی نخواهد داشت. با توجه به بیولوژی پیچیده تومور،



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در برابر سرطان‌ها مورد نیاز است. از طریق Heal star® مطالعات گسترده‌ای برای درک مکانیسم‌های اساسی استانداردسازی مناسب، این محلول می‌تواند برای درمان سرطان سینه یا سایر انواع بدخیمی‌ها مورد استفاده قرار گیرد.

**Keywords:** ریز محیط توموری، سلول‌های بنیادی سرطانی پستان، کشت همزمان، استرس سلولی، گرسنگی سرمی



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P-1182

## Oral microbiota and its effect on immune system in colorectal cancer

Sara Sanjarian - Ali Zarei - Hossein Javid - Abolfazl Khalafi-nezhad - Sara Senemar

جهاد دانشگاهی فارس

### Abstract

The relationship between humans and microbes is a two-way relationship that can lead to many diseases, such as diabetes, metabolic disorders, liver diseases, and various cancers. Dysbiosis can occur in periodontitis diseases or poor oral hygiene because the mouth is a major source of microbiome. The presence of oral microbiota in the colon can result in the occurrence and spread of diseases such as colorectal cancer. The feces of patients with colorectal cancer have been observed to have a common microbiota with the oral microbiota recently. Microbial changes can be influenced by lifestyle, nutrition, and obesity. Our research focuses on the relationship between oral microbiota such as Gemella, Peptostreptococcus, and Parvimonas and inflammation and the development of colorectal cancer in southern Iran.

**Keywords:** Oral microbiota, colorectal cancer, immune system



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P-1039

## The Role of Nurses in Spiritual Care of Children with Cancer at the End Stages of Life

Sima Vadaei - Seyed maryam Mousavi

دانشگاه آزاد اسلامی واحد خوراسگان

### Abstract

**Introduction and Goals:** Annually, 3 to 4 out of every 100,000 are diagnosed with cancer. This disease is especially important due to the feelings of hopelessness, and deep fear it can cause in individuals. Long, invasive and painful treatments also increase the severity of sociopsychological problems. Nurses are the main providers of spiritual care for patients. Therefore. Due to the importance of spiritual care in children suffering from cancer and the necessity of a comprehensive care regimen for decreasing the pain and suffering of these parties, the current study was conducted to investigate the role of nurses in providing spiritual care for children with cancer at the end stages of their lives .

**Methodology:** The current study is a comprehensive review of scientific publications. Due to the limitation of the available resources, the searches were conducted among English publications released between the years 2000 to 2022 and 1390 (2011) to 1401 (2022) for Persian publications. Searches were conducted using credible internet databases (Science Direct, PubMed, IranMedEx, SID, ISC, Magiran, MedLib and Google Scholar) using related keywords between the years 2000 to 2022 and 1390 (2011) to 1401 (2022) for Persian publications.

**Findings and discussion:** The current study provided new insights regarding the concept of spiritual care for children with cancer at the end stages of their lives using a combination of evidence from nursing, medical and theology texts. The characteristics of spiritual care for children presented in the current study can provide a framework for explicit nursing practices which can be used in spiritual care. This framework specifies the records, consequences and children's characteristics and can be used for determining the spiritual needs of these children, providing spiritual care and evaluating the results of spiritual care nursing.

**Keywords:** Children, cancer, Spiritual Care, end of life



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P-1128

## Role of Magnetic Nanoparticles in Early Diagnostic of Cancer by Magnetic Resonance Imaging

Samad Hasani - Yunus Soleymani

دانشگاه علوم پزشکی تبریز - دانشگاه علوم پزشکی تهران

### Abstract

**Introduction:** Magnetic nanoparticles (MNPs) have been studied for their potential use in cancer detection, screening, and treatment for several decades. Magnetic nanoparticles can be used to detect cancer early and screen for it using magnetic resonance imaging or sensing systems. These sensors are designed to detect specific biomarkers that can be related to the onset or progression of cancer during and after treatment. Magnetic nanoparticles have unique properties that are widely used in cancer therapy as drug delivery agents to target specific locations by manipulating them in vivo using an external magnetic field. The purpose of this review study was to investigate the implications of magnetic nanoparticles in cancer diagnosis, treatment, and drug delivery, as well as the prospects for future development and challenges

**Methods:** The keywords of “magnetic nanoparticles”, “cancer biomarkers”, “sensors”, “targeted drug delivery”, and “cancer detection” were entered into scientific databases of Google Scholar, Scopus, PubMed, and Elsevier. About ten fully relevant papers were extracted and reviewed

**Results:** Sensors for diagnosis and monitoring of biomarkers involved in cancer based on MNPs included a variety range of targets such as alpha-fetoprotein, anterior gradient homolog 2, cancer antigen 153, carcinoembryonic antigen, human chorionic gonadotropin hormone, Interleukin 6, human prostate cancer cells, etc. Also, the detection methods included electrochemical, UV-Vis spectroscopy, flow cytometry, fluorescence, piezoelectric, colorimetric, and optical methods. Overall, the majority of the papers have reported that MNPs have significant toxicity, which has led to many restrictions on their biomedical and clinical use. Some papers have suggested surface coating and functionalization of MNPs with different organic and inorganic layers as methods to improve their features and reduce their potential toxicity to human health

**Conclusions:** The use of MNPs for drug-targeted delivery is still in continuous development, and the synthesis of high-performance magnetic drug delivery systems and integration of multifunctional ligands are being continuously investigated. Although considerable efforts have been made in medicine related to the use of MNPs for modern and efficient therapies in cancer, there is still much more to discover before these materials can be safely used to increase life expectancy and prolong cancer patient survival. Until obstacles such as elimination from the body and long-term toxicity are completely overcome, their clinical applications are impossible to achieve



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**Keywords:** magnetic nanoparticles, cancer biomarkers, sensors, targeted drug delivery, cancer detection



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P-1043

## The effect of telenursing on care of patients with cancer: a systematic review

Hasanali Jafarpour - Morteza Rahimnejad - Mostafa Mostafazadeh\_Bora

دانشگاه علوم پزشکی بابل - دانشگاه علوم پزشکی بابل - دانشگاه علوم پزشکی بابل

### Abstract

Purpose: cancer is chronic disease that can create numerous health problems. These problems can manage via cooperation between patient and health care provider. Patient education is one of the most important goals in providing health care services. The utility of novel approaches such as telenursing can help patient with cancer. Despite the important this issue, telenursing as new paradigm needs more attention in various aspects of patient management and true effect of telenursing is unclear. This study aimed to assess the effect of telenursing on care of patients with cancer.

Methods: we searched electronic database from inception up to February 7 2022. The database include science direct, PubMed, Scopus, and Cochran database. In this study, the search process includes combination of keywords based on MeSH terms. All of articles with several terms in title "telenursing", "tele\_nursing", "cancer", "neoplasm", "tumor", and "malignancy" was included. According to inclusion and exclusion criteria, articles were assessed and duplicate papers were removed. Then, title and abstracts of suitable articles were screened and the content of article was assessed. Two researcher extracted the data article based on a data extraction form including publication information (name of first author, year, and location), study design (trial design), total sample size, intervention period), participant characteristics (gender and mean age), and main outcomes, including the effect of intervention on cancer care.

Finding: our initial search yielded 412 recorded, 8 studies were included. The studies was conducted in various countries including Iran (n=2), japan (n=1), Denmark (n=1), China (n=1), USA (n=2), and Brazil (n=1). The data collected during time of study, recommends that telenursing improve supportive care needs of patients with cancer, quality of care, and patient satisfactory. Also, it decrease cancer complication as fatigue, nausea, depression, anxiety, pain, and feeling of well-being and reduce cost related cancer. Satisfaction rates of patients in telenursing groups (93%) higher than home health visits (81%), significantly. Also, telenursing visits cost was lower than home visits. Other studies assess the effect of telenursing on supportive care needs in 5 dimensions psychological, health system and information (HIS), patient care and support, physical and daily living, and sexuality that show telenursing groups had lower score than control groups. Also, telenursing groups were lower postoperative complications, decrease nausea and vomiting related to chemotherapy, pain, and cancer-related-fatigue.

Conclusion: although, most studies demonstrate that telenursing in cancer care is effective, a big challenge in this study was methodological heterogeneity and various instruments tool that



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influence correct assessment telenursing on cancer care. Yet still the notability of telenursing and its dimensions is extremely imprecise. Telenursing is as a new model in current century. The use of technology can help removal of long distance and cost restriction. According to studies assessment and methodology in this study, we suggest that future studies include deep concepts telenursing and benefit on all of aspects cancer care. The use of telenursing in future studies can improve nursing concepts.

**Keywords:** Telenursing, nurse, cancer, health care



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P-1066

## Extraction of phycocyanin and investigation of its effect on the survival and induction of apoptosis of Hela and Skove3 cells

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### Abstract

زمینه: فیکوسیانین یک رنگدانه آبی، بیلی پروتئینی و محلول در آب موجود در جلبک اسپرولینا پلاتنسیس است که به دلیل خواص پزشکی و دارویی زیادی که دارد توجه دانشمندان را به خود جلب کرده است. توانایی فیکوسیانین استخراج شده از جلبک اسپرولینا پلاتنسیس در ایجاد تغییر پتانسیل غشا میتوکندریایی منجر به القای آپوپتوز در رده‌های سلولی سرطانی می‌شود به همین دلیل می‌تواند در درمان سرطان موثر باشد.

روش: در این پژوهش استخراج عصاره جلبک اسپرولینا به روش ذوب و انجماد صورت گرفت به طوری که به منظور تخریب بیشتر ساختار سلولی و پیوندهای فیزیکی قبل از انجماد، با ازت مایع در دمای ۱۹۳- سانتی گراد کوبانده شد. خالص سازی فیکوسیانین موجود در عصاره طی دو مرحله صورت گرفت. به این صورت که در مرحله اول پروتئین موجود در عصاره خام از طریق رسوب دادن تدریجی آن با محلول اشباع آمونیوم سولفات ته نشین و جمع آوری شد. سپس به منظور حذف نمک‌های موجود در رسوب حاصل، دیالیز آن به مدت ۷۲ ساعت در محلول بافر پتاسیم فسفات صورت گرفت.

یافته‌ها: به منظور شناسایی ساختار و ترکیبات و پیوندهای شیمیایی فیکوسیانین استخراج شده از روش طیف سنجی مادون و دستگاه گاز کروماتوگراف- طیف سنج جرمی استفاده شد. برای بررسی میزان سمیت عصاره (FTIR) قرمز تبدیل فوریه استفاده شد و میزان زنده MTT روی سلول‌های مورد مطالعه در این آزمایش در شرایط برون تنی از آزمون سمیت شناسی بودن سلول‌ها در غلظت‌ها و زمان‌های مختلف پس از تیمار سلول‌ها با عصاره به دست آمد. غلظت عصاره استخراج شده ۴۰۰۰ میکروگرم بر میلی‌لیتر و غلظت فیکوسیانین موجود عصاره ۲/۰۴ میلی‌گرم بر میلی‌لیتر و خلوص آن ۲۳ درصد بوده است. پس از یک مرحله خالص سازی با محلول آمونیوم سولفات میزان غلظت و خلوص فیکوسیانین به ترتیب به ۹/۷۵ میلی‌گرم بر میلی‌لیتر و ۸۴ درصد افزایش یافت. میزان بقای سلول‌های سرطان دهانه رحم با افزایش غلظت و افزایش طول مدت تیمار از ۹۸/۷ درصد به ۳۳/۹ درصد و میزان بقای سلول‌های سرطان تخمدان نیز از ۱۰۰/۶ درصد به ۱۳/۳ درصد، نشان می‌دهد GC-MS رسید. مطالعه حاضر نشان داد که فیکوسیانین گروه‌های عاملی فعالی را نشان می‌دهد. نتایج آنالیز ترکیباتی شامل فنل‌ها، اکسیژن و ترکیبات نیتروژن، هیدروکربن‌های معطر و غیر آروماتیک در نمونه سنتز شده وجود دارد. در ۲۴ و ۴۸ و ۷۲ ساعت، تحت تیمار با غلظت‌های مختلف فیکوسیانین مشاهده Hela کاهش وابسته به دوز بقای سلول‌های در غلظت‌های Hela گردید. با افزایش زمان تیمار سلول‌ها از ۲۴ ساعت تا ۷۲ ساعت، میزان حیات سلولی برای سلول‌های یکسان کاهش می‌یابد. با افزایش زمان تیمار سلول‌ها از ۲۴ ساعت تا ۷۲ ساعت، میزان حیات سلولی برای سلول‌های در غلظت‌های یکسان کاهش می‌یابد. با افزایش زمان تیمار سلول‌ها از ۲۴ ساعت تا ۷۲ ساعت، میزان حیات SKOV3 کاهش می‌یابد. کمترین میزان بقای سلولی در حضور غلظت ۴۰۰۰ میکروگرم بر میلی‌لیتر HDF سلولی برای سلول‌های فیکوسیانین مشاهده شد که پس از گذشت ۲۴، ۴۸ و ۷۲ ساعت به ترتیب منجر به ۵/۱۴ و ۲/۵۱ و ۸/۷۱ زنده ماندن سلول‌ها شد.

نتیجه گیری: در مجموع نتایج حاصل از پژوهش حاضر نشان داد که فیکوسیانین می‌تواند در درمان سرطان تخمدان استفاده شود و پایه و اساس تحقیقات بیشتر در زمینه توسعه داروهای درمان سرطان را ایجاد کند.

**Keywords:** استخراج، فیکوسیانین، اسپرولینا پلاتنسیس، ضد سرطان، سمیت سلولی، سرطان تخمدان، سرطان دهانه رحم



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## Fatalism in breast cancer and performing mammography on women with or without a family history of breast cancer

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### Abstract

Background: Breast cancer is the most prevalent cancer in women, and in those with a positive family history, it is important to perform mammography. One of the probable barriers in doing mammography is fatalism.

Methods: This is a descriptive/cross-sectional study conducted on 400 women residing in Isfahan, Iran, randomly selected in 2017. Sampling was done randomly among the enrolled women in Health Integrity System. The data collection tool was a questionnaire regarding the demographic-fertility information and fatalism. The data analysis was done by SPSS software. A P-value  $\leq 0.05$  was considered statistically significant.

Results: The results showed that the mean rate of fatalism was  $59.5 \pm 23.2$  in women with the experience of mammography, and  $65.9 \pm 18.7$  in women without the experience. Moreover, the mean rate of fatalism was  $73.1 \pm 15.2$  in subjects with a family history of breast cancer, and  $59.3 \pm 22.5$  in those no family history related to this condition. Accordingly, fatalism was statistically significant associated ( $P < 0.001$ ) with a family history of breast cancer and experience of mammography. There was no significant relationship between demographic information and fatalism ( $P > 0.05$ ).

Conclusion: The results indicated that fatalism in women with no experience of mammography was higher than in those with a positive history. Regarding the necessity of mammography in women with a family history of breast cancer, the required interventions seem to be essential to changing the viewpoints of women regarding the importance and effect of mammography as a screening method for breast cancer.

**Keywords:** Breast cancer, Family history, Fatalism, Mammography



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## Investigating the Factors That Effect on the Occurrence of Missed Nursing Care in Cancer Patients

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### Abstract

مقدمه: سرطان یکی از مهم ترین دلایل مرگ و میر در جهان به شمار می آید و فرایند بیماری و درمان های انجام شده نیازمند مراقبت پرستاری مختلف و مداوم است؛ عدم انجام یا تاخیر در انجام مراقبت های مورد نیاز به عنوان مراقبت از دست رفته شناخته می شود که می تواند تبعات منفی از قبیل وخامت وضعیت بالینی بیمار، افزایش مخارج، اشغال تخت های بیمارستان و نارضایتی بیمار را به دنبال داشته باشد. لذا شناسایی عوامل موثر در وقوع مراقبت پرستاری از دست رفته موضوعی حائز اهمیت است و این مطالعه با هدف بررسی عوامل موثر بر مراقبت از دست رفته در بیماران مبتلا به سرطان انجام شده است.

روش جستجو: در مطالعه مروری حاضر کلید واژه های سرطان، مراقبت های از دست رفته، پرستاری، بخش آنکولوژی، و گوگل، Scopus، PubMed، SID در پایگاه های اینترنتی oncology units، nursing care، missed care، cancer اسکولار در محدوده زمانی ۲۰۱۰ تا ۲۰۲۳ مورد جستجو قرار گرفتند. در مجموع ۳۰ مقاله یافت شد که از این بین ۵ مقاله که فول قابل دسترس نداشت، به زبان غیر فارسی یا غیر انگلیسی بود و در نوبت انتشار بود از مطالعه خارج و در نهایت ۲۵ مقاله مورد بررسی قرار گرفت.

یافته ها: نتایج مطالعات حاضر عوامل موثر بر مراقبت از دست رفته را به دو دسته درونی و بیرونی تقسیم کرده اند. عوامل درونی شامل: سهل انگاری، بی ارزش شدن برخی از جنبه های مراقبت، عدم رعایت اصل عدالت در ارائه مراقبت، تصمیم گیری بر اساس علایق و احساسات شخصی و کاهش علم و مهارت بالینی پرستاران می باشد. عوامل خارجی شامل: کمبود منابع انسانی، فقدان هماهنگی و برنامه ریزی سازمانی، فقدان برنامه آموزشی مستمر، عدم توجه به نظرات و نیازهای پرستاران در هنگام اتخاذ تصمیمات، جو اخلاقی حاکم در محیط کار، رویکرد مدیریت تنبیهی، عدم بکارگیری پرستاران متخصص برای ارائه مراقبت های خاص، عدم تامین تجهیزات و لوازم مورد نیاز، اختلال در کار تیمی و فقدان روش مناسب برای ارزیابی مراقبت های از دست رفته می باشد.

نتیجه گیری: بر اساس یافته های بدست آمده به نظر می رسد جهت کاهش وقوع مراقبت پرستاری از دست رفته در بخش های آنکولوژی لازم است بر حسب علل شناسایی شده راهکار هایی متمرکز بر رفع علل درونی و بیرونی از قبیل تقویت مهارت های بالینی و ارتباطی پرستاران، برگزاری کارگاه های آموزشی مستمر با تمرکز بر انواع مراقبت پرستاری، تقویت رعایت اخلاق حرفه ای پرستاران، افزایش تعداد نیروی متخصص و تامین وسایل و تجهیزات کافی برای ارائه مراقبت مورد استفاده قرار گیرند. همچنین انتظار می رود که مسئولین و اساتید، پرستاران را متقاعد کنند که در هنگام ارائه مراقبت های پرستاری بر رفاه عمومی همه ذینفعان و برابری و عدالت تمرکز کرده و بر اساس علایق فردی یا احساسات شخصی تصمیم گیری نکنند.

**Keywords:** مراقبت از دست رفته، پرستاری، سرطان



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P-1064

## Investigating the level of awareness, attitude and knowledge of special care nurses in health service centers of Hamedan province regarding nursing of cancer patients

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علوم پزشکی ه - دانشگاه علوم پزشکی همدان - دانشگاه علوم پزشکی همدان - دانشگاه علوم پزشکی همدان - دانشگاه علوم پزشکی همدان - دانشگاه علوم پزشکی همدان

### Abstract

مقدمه: در سیستم سلامت، باتوجه به این که پرستاران نقش مهمی در بهبود استانداردهای بهداشتی دارند، باید درباره ی دانش نظری، آگاهی و نگرش به روز شوند. از دیگر سوی پرستاری مراقبت های ویژه یک شاخه اختصاصی از رشته پرستاری است که از طریق بهینه سازی مراقبت های پرستاری از بیماران بد حال و نیازمند به مراقبت های ویژه موجبات مراقبت پرستاری، کاهش مرگ و میر و عوارض بیماری در بخش های ویژه را فراهم می سازد ۱. پرستار مراقبت های ویژه نسبت به پرستاران سایر بخش ها، وظایف بسیار بیشتری بر عهده دارد، زیرا بیماری که در این بخش بستری است از لحاظ جسمی در وضعیت خطرناکی قرار دارد و باید بخش اعظمی از توجه خود را به آن معطوف کند. پرستاری که در بخش مراقبت های ویژه مشغول فعالیت است، ضمن مراقبت از وضعیت سلامت بیمار، باید اعمال حیاتی همچون ضربان قلب و اکسیژن خون بیمار را بطور مدام چک کند تا بیمار در وضعیت اضطراری قرار نگیرد ۲ و ۳. هدف از پژوهش حاضر بررسی میزان آگاهی، دانش و نگرش پرستاران مراقبت های ویژه مراکز خدماتی بهداشتی استان همدان در خصوص پرستاری از بیماران سرطانی می باشد.

مواد و روش ها: این مطالعه به روش توصیفی مقطعی در سال ۱۳۹۹ به کمک ابزار پرسشنامه انجام شد. جامعه پژوهش را کلیه پرستاران مراقبت های ویژه استان همدان شاغل در بخش های مراقبت های ویژه بیماران سرطانی و به روش سرشماری شد و توسط آزمون های SPSS انتخاب شده بودند، تشکیل دادند. پرسشنامه ها پس از گردآوری و دسته بندی وارد نرم افزار آماری مختلف (تی تست مستقل، آنالیز واریانس و پیرسون) مورد تجزیه و تحلیل قرار گرفت.

یافته ها: یافته های پژوهش نشان داد که میزان دانش، آگاهی و نگرش اکثر پرستاران مراقبت های ویژه در سطح متوسط رو به پایین قرار دارد، یعنی بین "سن و آگاهی"، "سن و دانش" و "سابقه خدمت و آگاهی" همبستگی خطی وجود دارد، ضمناً جهت این همبستگی ها منفی است، به گونه ای که با افزایش سن و سابقه خدمت میزان آگاهی و دانش کاهش می یابد. سایر یافته ها نشان داد میانگین دانش افرادی که در دانشگاه آزاد تحصیل کرده اند از میانگین دانش فارغ التحصیلان دانشگاه های تیب ۲ و ۳ اختلاف معنی داری مشاهده نشد.

نتیجه گیری: با توجه به نتایج پژوهش و میزان آگاهی و نگرش و دانش پرستاران مراقبت های ویژه نسبت به پرستار بیماران سرطانی در سطح استان همدان، می توان گفت که بایستی برنامه ریزی هایی درخصوص برگزاری کارگاه و دوره های آموزشی آشناسازی پرستاران مراقبت های ویژه با پرستاری بیماران سرطانی و ابعاد و امکانات آن آشنا نمود. بنابراین می توان با ایجاد زیرساخت های لازم جهت آموزش پرستاری مراقبت های ویژه این بیماران در سطح مراکز خدمات درمانی بهداشتی استان، گام های کوچکی در کاهش هزینه های درمانی، مراقبت و درمان به موقع بیماران برداشت.

**Keywords:** پرستاری مراقبت های ویژه، بیماران سرطانی، دانش، نگرش، آگاهی



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P-1059

## Investigating the impact of self-care training on the quality of life in patients with cancer: A Systematic Review

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### Abstract

**Introduction:** cancer and adverse effects of chemotherapy disorder physical, psychosocial, social and spiritual proceeds and reduce the quality of life in patients. So, Self-care education should be improved to sense of well-being in patients. In order to reduce physical, functional and emotional side effects in chemotherapy patients and improve their quality of life, various interventions have been included in the rehabilitation programs of these patients, including self-care interventions. Self-care is a strategy that help people to adapt to the events and stresses of life, which promotes health and non-dependence. by application of these special activities, the symptoms of the disease will be reduced. Regarding to the importance of self-care and its impact on quality of life, and limited studies in this field, this study tried to systematic review the relationship between self-care training and quality of life in cancer patients.

**Methods:** In this study, the articles published at intervals from 2012 to 2022 in the databases including Web of Science, PubMed, Science direct, Embase, Google scholar, SID and Iran-medex. The keywords including "self-care training", "quality of life", "cancer" were examined. Studies published in English and Persian were considered as eligible.

**Results:** According to 12 studies that were examined, the knowledge of disease and self-care method from self-care education program can increase the ability of patients to cooperation of care. These articles shows that application of Orem based self-care programs built on the patient's educational needs on quality of life in cancer patients is probably effective. Based on C30-QLQ test, average score represented a significant statistical difference in different educational groups; in other words, as a result of self-care training, the quality of life of cancer patients has increased.

**Conclusion:** This literature review showed that self care training plays an important role in quality of life. According to the findings, self-care can stimulate the repressed and forgotten abilities and use them to eliminate the disabilities in patients with cancer. The implementation of the self-care program can improve the motivation and self-confidence of these patients so that they accept the responsibility of taking care of themselves and use the power of self-care to solve their problems.

Therefore, although success in treatment is desirable for prolonging the life of patients, it is not enough to increase the survival of patients, because patients do not just want to survive but also want to live. Cancer has many side effects and not controlling them may neutralize any advantage of this increase in survival due to the increase in the costs of side effects. This issue indicates the need of these patients for complete and comprehensive physical, psychological and social care so



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that they can have a good quality of life; Therefore, the need to take strategies in the field of disease control, treatment and improvement of their quality of life is strongly felt. Since the nurse is one of the key members of the professional health team who has a positive role in caring patients and improving the quality of life of them, adding the self-care education in nursing services and creating an organizational post for it, it can be more widely Support cancer patients.

**Keywords:** Self-care Training, Quality of Life, Cancer



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P-1034

## Spiritual Care in Cancer Patients and the Role of Nurses: A Review

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دانشگاه آزاد اسلامی واحد خوراسگان - دانشگاه آزاد اسلامی واحد خوراسگان

### Abstract

**Introduction:** Cancer is the second biggest cause of death worldwide. Suffering from cancer, long-term treatments and fear of the future can affect the physical, social and emotional performance of the patients. Therefore, patients and their families can enter a cycle of mental problems and start the process of searching for meaning in life. These conditions also increase the spiritual needs of the patients and failure to answer these needs can result in mental problems and subsequent consequences. The World Health Organization (WHO) defines spirituality as the fourth dimension of health and suggests it is an important element in patient management. It is believed that spirituality, as one of the essential dimensions of care, can result in decreased stress and anxiety and improve the quality of life in cancer patients. Therefore, the current study aims to investigate the effect of spiritual care on cancer patients and the role of nurses in this care .

**Methodology:** The current study is a review study where the researchers searched various databases such as Google Scholar, Science Direct, PubMed, Medline, SID, and Magiran using keywords of “Spiritual Care”, “Religion”, “Neoplasm [mesh]”, “Oncology Nursing” and “Oncology”, “Malignancy [mesh]”, “Cancer [mesh]”, “Spirituality” and “[Mesh]” in 5 years from 2017 to 2022.

**Discussion:** Spirituality and religion are coping methods for cancer patients. The results indicated that patients are willing to use spiritual cases. Spiritual welfare was inversely proportional to the mental disorder factors such as depression, hopelessness, and suicidal thoughts in patients. In the investigated studies, there was a positive correlation between spirituality and quality of life and a negative correlation with mental distress. Based on the role of spirituality, it was emphasized that spirituality and religion had a significant effect on the quality of life of cancer patients and that spirituality is often strengthened after a cancer diagnosis to improve the quality of life. Unfortunately, this factor is often ignored by the majority of healthcare experts.

**Conclusion:** Spiritual care is a unique aspect of care which cannot be replaced with religious or sociopsychological care and aims to answer essential questions such as the meaning behind life, pain, suffering and death. Spiritual care is based on empathy, care, and kindness between patients and nurses. This care emphasizes the personal impotence of patients, answers to their religious and non-religious needs and using spiritual care can help maintain a person’s dignity up to the moment of death. The spiritual care knowledge and skills of nurses are often insufficient for answering the spiritual needs of the patients. Therefore, nurses, for improving the quality of spiritual care provided for patients, require immediate training in this field. One of the spiritual care training protocols for nurses is based on the concept of mutual growth with patients and improves the



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spiritual well-being and spiritual care competencies in nurses. Therefore, it can be said that the missing link in providing spiritual care for patients with difficult-to-treat diseases such as cancer is the lack of an educational plan and clinical guidelines for medical staff, especially nurses

**Keywords:** cancer, Spiritual Care, Role of Nurses, oncology, religious



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P-1060

## Investigation of nursing interventions performed on head and neck cancer patients: a review study

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### Abstract

مقدمه: سرطان سر و گردن هفتمین سرطان شایع جهان است. بیماران مبتلا به این سرطان بدلیل محل آناتومیکی توده، عوارض فراوانی را که ناشی از خودبیماری و روند درمان آن است را تجربه می کنند. باتوجه به این موضوع نیاز به مراقبت خاص و مناسب دارند. پرستاران به دلیل نقشی که در آموزش و مراقبت از بیماران دارند می توانند با ارائه آموزش و مراقبت مناسب در کنترل مشکلات این بیماران تاثیرگذار باشند مطالعه حاضر با هدف مروری بر مداخلات پرستاری انجام شده بر روی بیماران مبتلا به سرطان سر گردن انجام شده است.

Nursing intervention , Head and Neck Cancer, روش کار: این مطالعه مروری با جست و جوی کلید واژه های و موتور جست Pubmed , Science Direct , Web of Science , Scopus در پایگاه های اطلاعاتی Nursing Care بدون محدودیت زمانی انجام شد. در مجموع ۲۵ مقاله یافت شد که با حذف مقالات تکراری، زبان google scholar و جوی غیرفارسی یا غیر انگلیسی، و متن کامل غیر قابل دسترس نهایتا ۱۰ مقاله باقی و پس از تایید کیفیت آن ها با استفاده از مورد بررسی قرار گرفتند JBI ابزارهای

یافته ها: بررسی مطالعات نشان می دهد که مداخلات پرستاری در سه دسته مختلف ارائه شده اند؛ دسته اول شامل اقداماتی پیرامون بعد جسمی بیماران بود مانند: آموزش مدیریت علائم، افزایش توان جسمی و انجام کارهای روزانه دسته دوم شامل اقداماتی مربوط به بعد روانی اجتماعی بیماران مانند: آموزش های روانی - اجتماعی، عاطفی و آموزش های مربوط به سبک زندگی و دسته سوم اقدامات بازتوانی شامل آموزش های ارتقای سلامت، تمرینات و آموزش های بازتوانی بوده است که به شیوه های مختلف و با بکارگیری الگو ها و مدل های مختلف پرستاری مانند: انجام مدل مراقبت پیگیر با استفاده از ویزیت های مکرر در منزل یا پیگیری با استفاده از تکنولوژی های جدید مانند شبکه های اجتماعی یا تماس تلفنی، اجرای مراقبت فرد محور و مبتنی بر خودمراقبتی، برنامه مراقبت در منزل و مراقبت مبتنی بر تلفن همراه و اپلیکیشن به انجام رسیده است. معیار ارزیابی اثربخشی مداخلات در مطالعات انجام شده میزان کیفیت زندگی، میزان خودکارآمدی، عملکرد فعالیت روزانه، استرس و اضطراب، افسردگی و سازگاری بوده است که با استفاده از ابزارهای استاندارد اندازه گیری شده است. مجموع یافته های مقالات پیرامون اثربخشی مداخلات نشان می دهد که بیماران در بیشتر ابعاد کیفیت زندگی و عملکرد روزانه مانند: بازشدن دهان و بلع و لذت بردن از وعده غذایی، عملکردهای فیزیکی و عاطفی، پذیرش نقش و سازگاری روانی اجتماعی پس از انجام مداخله نمرات بیشتری کسب کرده اند همچنین عوارضی مانند خستگی، درد، تهوع، استفراغ، اشتهای بیوست، استرس، اضطراب، افسردگی و میزان روی آوردن به مصرف سیگار و الکل در این بیماران کاهش چشمگیری پیدا کرده بود.

نتیجه گیری: باتوجه به افزایش روزافزون آمار مبتلایان به سرطان و اهمیت ارائه مراقبت مناسب به این بیماران جهت افزایش کیفیت زندگی آن ها، انجام مداخلاتی با استفاده از سایر الگوها و مدل های مراقبت پرستاری جهت کشف بهترین مداخله توصیه میگردد؛ همچنین لازم است مطالعات آتی به شناسایی و معرفی راهبردهایی برای اجرا و گسترش این مداخلات بپردازند تا با فراهم شدن زمینه ای برای افزایش کیفیت زندگی بیماران شاهد کاهش هزینه های اقتصادی و افزایش دستیابی به نیری انسانی کارآمدتر باشیم.

**Keywords:** مراقبت پرستاری، مداخله پرستاری، سرطان سر و گردن



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P-1100

## Investigating expression level of BCL-2 gene under treatment with a novel Liposomal Indole Compound on the AML Cell Line

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### Abstract

Background: Acute myeloid leukemia (AML) is a malignant disease that prevents differentiation of the myeloid lineage. There are different types of treatment strategies including chemotherapy, surgery and radiation for curing AML but the typical method is chemotherapy. Unfortunately, older and weak patients might not be able to endure sever chemotherapy; Hence, they need more effective treatment protocols. Also, the quality and response rate of alternative treatment methods for these patients is low. The big parts of anticancer drugs belong to Heterocyclic compounds. Indole derivatives have bicyclic structure including a six-membered ring which is linked to a five-membered nitrogen-containing pyrrole ring. Research conducted demonstrated that most of indole derivatives have broad anticancer effects on several cancer cell lines. In this study, we introduced a novel indole derivative (2-AITFEI-3-C) with tendency to facilitate apoptosis in KG-1 line.

Material and methods: In this study the KG-1 cell line as an AML-originated was cultured into RPMI 1640 media which was supplemented with 10% fetal bovine serum. Once the cells reached the appropriate confluence, they were treated by free and liposomal form of novel indole core-based derivative (C18H10N2F6O) with various concentrations of 20,40,100,200, and 400  $\mu\text{g}/\text{mL}$ . The cellular metabolic activity was examined by MTT assay. Finally, gene expression of BAX gene was investigated by q-PCR in order to assessment of apoptotic effect of this new compound.

Results: Results of the MTT assay indicated that the lethal effective dose of free indole was 245.1 / g / ml in 24 hours and 164.8 / g / ml in 48 hours. The lethal effective dose of the liposomal system containing indole drug was 47.2  $\mu\text{g} / \text{ml}$  in 24 hours and 40.6 / g / ml in 48 hours. The results indicate that the toxicity of indole is increased due to encapsulation. Moreover, BCL-2 gene expression decreased after treatment with free and liposomal form after 24 and 48 hours but statistical analysis showed that BCL-2 gene expression was just significant under the effect of liposomal form after 48 hours ( $p < 0.05$ ).

Conclusion: It can be concluded that this novel indole-core based derivative especially the liposomal form of it may have cytotoxic and antiproliferative impacts by triggering the apoptosis of AML cells and we can consider it as a useful agent to limit the process of tumor progression in the treatment of human malignancies.



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**Keywords:** AML, BCL-2, Indole, Liposome, Apoptosis, Cancer Therapy, Nanobiotechnology



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P-1120

## Investigating the toxicity effect of wheat germ oil on breast cancer MCF7 cell line

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### Abstract

**Introduction:** Cancer is the leading cause of mortality worldwide. Natural products derived from medicinal plants can play a significant role in cancer treatment. Therefore, the aim of this study is to investigate the effects of various concentrations of wheat germ oil on MCF7 cancer cells.

**Methods:** After culturing the MCF7 cell line, the cells were exposed to different concentrations of wheat germ oil ( $\mu\text{g/ml}$  30000-14.65) and incubated for 24, 48, and 72 hours. The MTT assay was employed to determine cytotoxicity.

**Findings:** The results indicated that wheat germ oil significantly reduced cell growth at various concentrations compared to the control group ( $p < 0.05$ ). The effect of wheat germ oil on inhibiting cell growth was both concentration- and time-dependent, with the highest percentage of growth inhibition (78.40%) observed at a concentration of 30,000  $\mu\text{g/ml}$  after 72 hours. Additionally, the IC50 value was calculated to be 131.48  $\mu\text{g/ml}$ .

**Conclusion:** The findings of this study suggest that different concentrations of wheat germ oil exhibit cytotoxic effects against the MCF7 cell line. Therefore, further research is necessary to elucidate the underlying mechanisms of this activity..

**Keywords:** MTT assay, wheat germ, MCF7 cell line, cancer



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P-1174

## The Effect of Self-care Training by Peer Group on the Resilience of Patients With Cancer: A Randomized Clinical Trial

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enter, School of Nursing and Midwifery, Kashan University of Medical. Trauma Nursing Research Center, School of Nursing - enter, School of Nursing and Midwifery, Kashan University of Medical. Trauma Nursing Research Center, School of Nursing - enter, Scho

### Abstract

ackground: Resilience is the individual's ability to maintain or restore mental health and physical function in the face of stressful events and adversity. However, educational interventions can enhance resilience. The present study was conducted to determine the effect of self-care education by peer groups on the resilience of patients with cancer. Methods: A Randomized Clinical Trial (RCT) was conducted on 80 patients with cancer referring to the chemotherapy center of Ayatollah Yathribi Hospital in Kashan City, Iran. The subjects were randomly assigned into the control and intervention groups (40 per group). Peer group members trained the intervention group in 4 sessions (one session per week), but the control group received routine care. The Connor-Davidson Resilience Scale (CD-RISC) was used to collect data at the beginning of the trial and then one week and three months after the intervention. Data analysis was performed using the independent t-test and repeated measures ANOVA in SPSS software, v. 16. Results: There was a significant difference between the mean score of the groups' resilience one week after the intervention ( $P=0.01$ ), but no significant difference was seen between the groups' resilience scores three months after the study ( $P=0.11$ ). However, based on the repeated measures ANOVA and the model's results using the Huynh-Feldt correction, there was an increase in the resilience score of the intervention group over time ( $P=0.008$ ). Furthermore, there was a significant difference between the two groups in terms of time\*group interaction, indicating a significant difference between the two groups in terms of resilience score over time ( $P=0.004$ ). Conclusion: It is suggested that this intervention be provided by the healthcare team along with routine treatments to improve the resilience and mental health of patients with cancer.

**Keywords:** Cancer, Clinical trial, Peer group, Psychological resilience, Patient education



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P-1217

## The effect of thymoquinone on oogenesis and the oocyte in vitro fertilization success in NMRI mice treated with cyclophosphamide

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### **Abstract**

**Objective:** The study objective was to determine the protective effects of thymoquinone (TQ) on oocyte quality in oogenesis and the quality of in vitro fertilization embryos in NMRI mice treated with cyclophosphamide.

**Materials and Methods:** Female NMRI mice were divided into five groups. All mice were sacrificed after that to aspirate their oocytes for further testing. The development of embryos up to the blastocyst stage was analyzed using mature oocytes in vitro fertilization (IVF). Finally, the oocytes were removed for biochemical assessments. SPSS and Mann-Whitney tests were used to analyze the data.

**Results:** TQ groups showed a decrease in oocyte degeneration compared to CPH groups, dose-dependently. TQ is safe for oocytes as evidenced by the increased numbers during the GV stage. A dose-dependent lower rate of metaphase I maturation was also observed in the TQ treatment groups compared to CPH, and fewer oocytes were maturing in the phase II stage. In this study, TQ significantly increased the number of two-cell and four-cell embryos after 24 and 48 hours of fertilization in comparison to the CPH group. Additionally, dose-dependently, CAT levels and MDA and NO levels were significantly higher and lower in the TQ groups as compared to the CPH groups. TQ-treated groups showed significant increases in levels of gene expression for BMP15 and GFDF-9, dose-dependently, compared to CPH groups.

**Conclusion:** In the current study, TQ attenuated oocyte cytokine levels and oxidative damage in ovarian tissues after CPH-induced oocyte degeneration in mice.

**Keywords:** Thymoquinone, Oocyte quality, Cyclophosphamide, Fertilized embryos



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P-1218

## Chrysin potential on the amelioration of Cyclophosphamide toxic effects on mouse oocytes and embryos

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### Abstract

**Objective:** The study investigates the protective effects of chrysin (CR) on the quality of oocytes and embryos of in vitro fertilization in rats treated with cyclophosphamide (CPH).

**Materials and Methods:** This study, female NMRI mice were divided into five groups: I. control group, II. sham group, III. CPH group (receiving 120 mg/kg.wk of CPH intraperitoneally (IP), IV and V: CR groups receiving 5 and 10 mg/kg. day CR for four weeks. For oocyte induction, ten units of pregnant mare serum gonadotropin was injected intraperitoneally after the last injection. All mice were then sacrificed by aspiration of their oocytes for further experiments. The growth of embryos was investigated using mature oocytes in vitro.

**Results:** CR significantly increased the number of 2 cells and 4 cells after 24 and 48 hours compared to the CPH group. Groups treated with CR showed a significant increase in the expression level of BMP-15 and GDF-9 gene in a dose-dependent manner compared to the CPH group.

**Conclusion:** In mice, CR reduced oxidative damage and oocyte cytokine levels in ovarian tissue after CPH-induced degeneration.

**Keywords:** Chrysin, Cyclophosphamide, Oocyte collection, Oocyte quality



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P-1041

## Investigating the effects of Ganoderma mushroom extract on MCF7 breast cancer cell line and Vero kidney epithelial cell line in selective culture medium

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### Abstract

Background and aim: studies show that extracts of medicinal plants have an effect on cancer cells. The main goal of this research is to investigate the effects of Ganoderma mushroom hydroalcoholic extract on MCF7 cell line (human breast cancer cell) and Vero cell line (African monkey kidney epithelial cell) in a culture medium.

Research method: 104 cells from Vero and MCF7 strains were cultured in 96 well plates. 24 hours after the cells adhered to the bottom of the plate, media containing Ganoderma extract in three concentrations of 1000, 100, and 10  $\mu\text{g/ml}$  were replaced with the initial media. All the samples were treated in three replicates and in the control group only the new medium was replaced. Then, in order to measure the toxicity effect of the extract, it was measured using the MTT assay with the help of an ELISA reader. Finally, the data were compared between groups using the statistical method of one-way variance test.

Results: MCF7 and Vero cell lines were affected by the dose of 10  $\mu\text{g/ml}$ , 100  $\mu\text{g/ml}$  and 10 mg/ml of Ganoderma mushroom extract, which caused a decrease in the viability of the cell lines, which have differences It was significant ( $P < 0.001$ ,  $P < 0.001$  and  $P < 0.001$ , respectively) compared to the control group, but at the concentration of 1 mg/ml of Ganoderma mushroom extract, it showed an increase in the proliferation of MCF7 and Vero lines, which has a significant difference ( respectively,  $P < 0.001$ ) compared to the control group.

Conclusion: Ganodermic acid obtained from Ganoderma extract affects the death receptors by activating the caspase 9 pathway to caspase 3 and ultimately increases apoptosis or cell death. In this way, it reduces cell proliferation in breast cancer cell line.

**Keywords:** breast cancer, inflammation, cell viability



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P-1074

## The Evaluation of Antioxidant and Anti-cancer Properties of Sambucus ebulus Leaf Extract on Lung Cancer A549 Cell Line

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### Abstract

**Introduction:** Cancer considers the one of the most reasons of mortality in worldwide. Components derived from natural plants that induce apoptosis are used for cancer treatment. Thus, the investigation of different herbal components for new anti-cancer drug is one of the main research activities throughout the world. Therefore, the purpose of this research is to investigate the antioxidant compounds of the extract of the Sambucus ebulus leaf and its inhibitory effect on A549 lung cancer cells.

**Materials and Methods:** Leaf of Sambucus ebulus was harvested from the Abbas Abad city and then dried in shade and extracted. In the following, A549 cells line was cultivated and proliferated. Then, the cells exposed to different concentrations of the leaf extract (31.25 to 4000 µg/ml) were incubated for 24, 48, and 72 hours. After the incubation period, the colorimetric MTT method was used to determine cytotoxicity. Also, total phenol, flavonoid, and anthocyanin contents were determined.

**Results:** The results indicated that the leaf extract is rich in phenol, flavonoid, and total anthocyanin compounds, so that the amount of these compounds in the leaf extract was obtained  $22.41 \pm 0.883$ ,  $1.29 \pm 0.016$ , and  $0.193 \pm 0.060$  mg-1g DW, respectively. Also, compared to control, the results reported that the different concentrations of leaf and root extracts had significantly reduced cell viability ( $p < 0.05$ ). The effect of extracts on cell growth inhibition was dependent on concentration and time, and the highest of cell growth inhibition were obtained at the concentration level of 4000 µg/ml leaf extract 97.47% in 72 hours, respectively.

**Conclusion:** The results of this study suggest that the leaf extract of Sambucus ebulus plant can be an accessible source of antioxidant compounds and with high anti-cancer properties it can be used as a medicinal plant against lung cancer subject to extensive research.

### Keywords:



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P-1017

## Social support and quality of life in Iranian clients with Cancer

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### **Abstract**

Background: Regarding the prevalence and incidence of cancer has been increased, it is important to conduct studies that are better suited to this chronic and stressful disease. The present study aimed to investigate the relationship between social support and quality of life in cancer patients.

Methods: A simple random sampling method was used in this descriptive study that was conducted in 2018. Data were collected using a demographic questionnaire, FACT\_G for assessing

quality of life questionnaire, and MPSS questionnaire in order to measure social support.

Results: The mean and standard deviation of the patients presented in the study was  $49.65 \pm 14.93$ .

The results showed that social support had a significant relationship with physical ( $B = -0.16$ ), psychological ( $B = -0.13$ ), social ( $B = 0.29$ ), and functional dimensions ( $B = 0.21$ ) of quality of life.

Conclusion: Patients need the support of the healthcare system, family, and their relatives. Social support provided by family and friends is an important factor in influencing the quality of life of cancer patients. As a result, this process will make the cancer patients better adapted.

**Keywords:** social support, quality of life, cancer



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P-1073

## Investigating the Anti-Cancer Effect of the Calyx Extract of *Physalis alkekengi* on Human Lung Cancer A549 Cell Line

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### Abstract

**Introduction:** Cancer is one of the most causes of mortality in worldwide. Lung cancer is the most common cancers, and chemotherapy cancer treatment as one of the methods leads to the occurrence of intolerable side effect. Thus recently, natural products extracted from medicinal plants can play an important role in cancer treatment. Therefore, the aim of this study, based on medicinal effect of the *Physalis alkekengi*, to determine the inhibitory effects of calyx extract on lung cancer A549 cell line.

**Materials and Methods:** For this propose, after collecting the calyx of *P. alkekengi* the curtain from its natural habitat in Abbas Abad city and dried in shade and then extracted. In the following, A549 cells line was cultivated and proliferated. Then, the cells exposed to different concentrations of the calyx extract of *P. alkekengi* (31.25 to 2000  $\mu\text{g/ml}$ ) were incubed for 24, 48, and 72 hours. After the incubation period, the colorimetric MTT method was used to determine cytotoxicity.

**Results:** The results showed that different concentrations of calyx extract inhibited the growth of cancer cells, so that the highest inhibitory effect was obtained at a concentration of 2000  $\mu\text{g/ml}$  that was 94.97%.

**Discussion:** Therefore, these results suggest that the ethanolic extract of the calyx of *P. alkekengi* has high cytotoxicity against the A549 cell line. It seems to come with further research, and utilizes its compound in cancer treatment.

**Keywords:** A549 cells line, Lung cancer, *Physalis alkekengi*, Calyx



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P-1089

## The most common cancer in Iranian children: a systematic review

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### Abstract

**Background :** Cancer is the second leading cause of death in children under the age of 15 in most parts of the world. Each year, approximately 100,000 children die of cancer before the age of 15 and more than 90% of them are in resource-limited countries. In Europe and North America, childhood cancers account for less than 0.5% of all incident cases, while this rate increases to 2% in developing countries. This systematic review was conducted with the aim of investigating the most common cancer in Iranian children.

**Methods:** This study is a systematic review in which articles published in the last 10 years (2012-2022) were reviewed from Scopus, ISI and PubMed databases. The keywords Prevalence, Pediatric Cancer, Iran and Neoplasm were used for searching.

**Inclusion criteria:** Articles that reported the frequency of cancer in Iranian children (under 18 years old) were included in the study. First, all articles extracted from Scopus, ISI, and PubMed databases were entered into endnote and duplicate articles were removed. In the following, the articles were selected by two authors after preliminary review of the title. Then, with a more detailed review, the final articles that reported the frequency of types of cancer in Iranian children were evaluated. Information such as the name of the author, year and location of the study, sample size and frequency of types of cancers were extracted from the selected final studies.

**Results:** Initially, 518 articles were selected, of which 331 articles were from the Web of Science database and 187 articles were from PubMed and Scopus databases. After the final reviews, 6 articles with 5921 samples were selected. The design of most of the studies is descriptive or cross-sectional and from the cities of Tehran, Ardabil, Babol, Fars, Mashhad, and one study was also from national data registration. The results of extracting the findings of the articles showed that in five studies that reported the frequency of cancer in Iranian children under the age of 17, leukemia was the most common type of cancer. And among the types of leukemia, acute lymphoid leukemia included almost half of the cases. Also, leukemia in boys has a higher prevalence compared to girls. But in a study conducted on children under 1 year of age, the most common cancer was retinoblastoma (44%) and leukemia ranked second.

**Conclusions:** The results of this study showed that the most common cancer in Iranian children was leukemia. But in children under one year, retinoblastoma was the most common. Considering that the number of studies was limited, more research is needed.



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**Keywords:** Prevalence, Pediatric Cancer, Iran, Neoplasm



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P-1105

## Dietary patterns in relation to risk of colorectal cancer: a case control study

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### Abstract

**Introduction:** Colorectal cancer (CRC) is the fourth leading cause of cancer mortality in both men and women. In Iran, CRC is the fourth and third most commonly diagnosed malignancy in men and women, respectively. The relationship between major dietary patterns and colorectal cancer (CRC) in other populations largely remains consistent across studies.

**Methods:** We conducted a hospital case-control study among Iranian adults referred to hospitals in Ahvaz. Data was collected from 150 colorectal cancer patients and 150 controls with non-neoplastic conditions. Dietary data were evaluated by food frequency questionnaire. Logistic regression analyses were performed to investigate the association between dietary patterns and the CRC risk.

**Results:** Three major dietary patterns were derived using factor analysis, namely a healthy, western and traditional pattern. Results suggest that the Westernized pattern increased the risk of CRC (OR=2.4, 95% CI=1.77-2.93). on the other hand, the Healthy dietary pattern was associated with a decreased risk of Colorectal Cancer (OR=0.36, 95% CI=0.28-0.51). Also our study not shown any significant association between traditional pattern and the Colorectal Cancer (OR=0.87, 95% CI=0.49-1.47).

**Conclusion:** Our study suggested that the "Healthy dietary pattern" seems reduce the risk of CRC, while the "Western dietary pattern" was associated with increased risk of CRC. In addition, the diet-disease relationships investigated here could be used to develop targeted interventions aimed at promoting healthy eating habits, with the goal of preventing CRC.

**Keywords:** colorectal cancer, food frequency questionnaire, dietary patterns



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P-1131

## The Impact of Art Therapy on Depression and Anxiety in Children with Cancer: A Systematic Review Study

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### **Abstract**

**Introduction:** A cancer diagnosis is one of the most stressful experiences for both the child and their family. Anxiety and depression are among the most common psychiatric disorders associated with cancer in children. Play therapy, art therapy, and music therapy are non-pharmacological treatment methods that researchers from various fields have increasingly utilized in recent years to reduce depression and anxiety in children with cancer. The primary aim of this systematic review is to examine the impact of art therapy (including play therapy, art therapy, and music therapy) on the levels of depression and anxiety in Iranian children diagnosed with cancer.

**Methods:** This study was conducted as a systematic review. To identify relevant articles, searches were performed in databases such as Google, MagIran, IranMedex, Google Scholar, Yabesh, Irandoc, and SID using keywords including play therapy, art therapy, music therapy, depression, anxiety, and children with cancer. Inclusion criteria encompassed all interventional studies that assessed the effects of one of the art therapy methods (play, art, and music therapy) on anxiety and depression in Iranian children with cancer, published in Persian and without time restrictions. The study subjects were children and adolescents with cancer (under 18 years of age).

**Results:** An initial search yielded 35 articles. After reviewing titles and abstracts and removing duplicates and irrelevant studies, 18 articles were selected for inclusion in the current study. All studies were conducted using a quasi-experimental design. The majority of the studies were based in Tehran and Mashhad. Among the 18 studies, 13 focused on play therapy, 3 on art therapy, and 2 on music therapy. A total of 504 participants were involved in these studies, all of whom were under 18 years of age. Of the 13 studies related to play therapy, 7 examined its impact on children's anxiety, while the others addressed depression, stress, pain symptoms, positive emotions, and levels of adaptation. The 3 studies on art therapy focused on depression, anxiety, emotions, and blood cell counts. The 2 studies on music therapy examined pain, stress, anxiety, happiness, and depression. The results indicated that all studies on play therapy significantly improved anxiety, depression, and stress while increasing positive emotions. Additionally, the findings from the studies on art therapy showed that this intervention significantly reduced anxiety, depression, and emotional regulation while increasing blood cell counts. The two studies on music therapy indicated a significant reduction in anxiety, depression, perceived pain, and stress, along with an increase in happiness.



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Conclusion: Based on the findings of this study, it can be concluded that play therapy, art therapy, and music therapy can serve as effective therapeutic approaches for reducing anxiety and depression in children with cancer within educational and therapeutic settings.

**Keywords:** Play therapy, art therapy, music therapy, anxiety, depression, children with cancer.



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P-1140

## Effect of therapeutic approaches on the improvement of chemotherapy-induced mucositis: a systematic review in patients with bone marrow transplantation

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### Abstract

**Introduction:** Oral mucositis is one of the common and serious side effects of patients undergoing radiotherapy or chemotherapy. Patients who undergo high-dose chemotherapy before bone marrow transplantation will experience severe oral mucositis, which can cause pain, severe nutritional and psychological problems. 20 to 40 percent of patients receiving chemotherapy suffer from this condition. Therefore, this systematic review study was conducted with the aim of the effect of treatment approaches on the improvement of mucositis caused by chemotherapy in patients with bone marrow transplantation.

**Methods:** The present study is a systematic review in which articles published from 2000-2023 were reviewed from Scopus and PubMed databases. The keywords Hematopoietic stem cell transplantation, Stomatitis, Bone marrow transplantation, Oral mucositis were used for the search. Inclusion criteria included clinical trial articles, English articles. Case report articles, conferences and non-pharmacological studies were excluded. Information such as the name of the author, year and place of the study, type of study, sample size, type of bone marrow transplantation, and treatment method were extracted from the selected studies.

**Results:** After the initial review by two authors, 772 articles were selected. Then the selected articles were examined more closely and finally, 22 articles with 1696 samples (857 in the intervention group and 868 in the control group) were evaluated. The most of the studies were related to Italy (4 studies), America (3 studies), Brazil (3 studies) and Iran (2 studies). The age range of people was between 4-90 years. The treatment methods used included: cryotherapy and laser were respectively 6 and 3 studies. In the 6 studies conducted on cryotherapy, the researchers investigated the effect of cryotherapy in 5 studies compared to routine care on mucositis improvement, 4 of which had a significant difference ( $P < 0.05$ ) and one study did not have a significant difference ( $P > 0.05$ ). Compared to the control group, laser therapy had a significant difference in the improvement of mucositis in the studies conducted ( $P < 0.05$ ). Cefozol, sucralfate, and molgramostim and growth factor mouthwashes did not affect the improvement of mucositis compared to the control group. However, polyprezinc gel, amifostine, cefozol and palifermin, saturated calcium solution and concentrated milk protein, chamomile and peppermint herbal mouthwashes were effective.



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Conclusions: According to the results of the studies, cryotherapy and laser were effective in improving mucositis, it can be used to improve mucositis in bone marrow transplant patients.

**Keywords:** Hematopoietic stem cell transplantation, Mucositis, Stomatitis, Bone marrow transplantation



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P-1146

## The effect of palliative care training by peers on knowledge, attitude about control of pain in patients with cancer

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### Abstract

**Aims:** Palliative care plays an important role in improving the quality of life of cancer patients. Regarding the role of counterparts, this study aimed to investigate the effect of peer education on peer education on knowledge, attitudes and treatment of cancer patients in the field of pain relief.

**Materials and Methods:** In this clinical trial, 64 patients with cancer were randomly selected and randomly divided into two groups. Control group with common education and intervention group were trained by their counterparts under the management training package. The research instrument was a questionnaire of knowledge and attitude that was completed before, 3 and 6 weeks after the intervention. Data were analyzed by SPSS software version 22 at a significant level of 0.05.

**Results:** The results showed that the two groups were homogeneous in terms of age, gender, type of cancer, type of treatment, family history, occupation and education, also the effect of palliative care education intervention by peers increased the level of awareness (from 50.9 to 57.4), attitude (from 54.16 to 95/31) in the intervention group three and six weeks after the intervention and has a significant difference ( $P < 0.001$ ).

**Conclusion:** Palliative care training by peers has an effect on the level of attitude and awareness of cancer patients about pain relief. It is recommended to get help from interested and literate colleagues in the pain management training of cancer patients.

**Keywords:** Cancer, Palliative care, Knowledge, Attitude, Peer education



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P-1183

## Phycocyanin lead to a reduction of human gastric cancer cells proliferation through the decrease of Bcl-2 expression

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### Abstract

The third greatest cause of cancer-related death worldwide is gastric cancer (GC). Many traditional GC treatments, including as chemotherapy and surgery, have numerous side effects and limit treatment effectiveness. As a result, it appears that applying new therapeutic drugs with fewer side effects and higher efficacy is important. In a number of cancer cell lines, phycocyanin from *Spirulina Platensis* has anti-tumor properties. However, the molecular mechanism of phycocyanin action remains unknown. The goal of this study was to determine the anticancer activity of phycocyanin from *Spirulina platensis* extract on MKN45 gastric cancer cell line, as well as its effect on the expression of Gli1 from the sonic hedgehog (Shh) signaling pathway, and Bcl-2 as a GLI1 target gene. Cytotoxicity and antiproliferation activity were assessed using the MTT test with various doses of phycocyanin and various incubation durations and stem-loop Taqman real-time PCR assay was used to examine GLI1 and Bcl-2 gene expression. Assays revealed that phycocyanin had a significant influence on gastric cancer cells (MK45) by decreasing proliferation and causing apoptosis via reducing the expression of the anti-apoptotic gene Bcl-2. Furthermore, phycocyanin has no effect on Bcl-2 genes in normal cells, which is significant for employing phycocyanin in cancer treatments to prevent unwanted side effects. Finally, the findings suggest that phycocyanin selectively triggers apoptosis in MK45 gastric cancer cell line by modifying the expression of the anti-apoptotic gene to some extent, which could lead to improved gastric cancer medication.

**Keywords:** Phycocyanin, Gastric cancer, Sonic hedgehog, apoptosis, anti-tumor



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P-1216

## Radioprotective Effects of Vitamin C, Cimetidine, and Famotidine on Lipid Peroxidase and Hepatic Glutathione Levels in Mouse Liver

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### Abstract

**Background:** Radiation therapy is one of the most effective therapies used for approximately 60% of the cancer patients. During radiation exposure, overproduction of reactive oxygen species (ROS) disrupts the lipid layer of membrane leads to subsequent peroxide radical formation. Cimetidine and Famotidine are histamine H2 receptor antagonist (H2 blocker), which are known as peptic ulcer drugs showing radioprotective effects. Vitamin C is an effective scavenger of free radicals and ROS, with significant radioprotective effects .

**Materials and Methods:** In this experimental study, male mice (6-8 weeks and 28±3 gr) were randomly divided into 5 groups: control group (without drug and radiation), group receiving radiation only, group receiving drug only, group receiving drug and radiation, and group receiving the combination of drugs along with radiation. Then, the activity of lipid peroxidase and the reduced and oxidized levels of glutathione in their liver were evaluated.

**Results:** By increasing radiation dose, lipid peroxidase and oxidized glutathione activity were increased and the glutathione content was reduced. The findings show that, in drug only group, Vitamin C had better protection than the other two drugs and also, the combination of three drugs had excellent radiation protection.

**Conclusion:** Radiation protection of normal cells in radiotherapy is a valuable necessity. A number of drugs have the ability to protect cells against ionizing radiation through different mechanisms. The obtained results suggest that, Famotidine, Cimetidine and Vitamin C can be radioprotective individually or in combination.

**Keywords:** Radioprotective, Vitamin C, Cimetidine, Famotidine, glutathione, lipid peroxidase



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P-1023

## A Review of the Most Effective Palliative Approaches Alongside Conventional Treatments in Breast Cancer

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### Abstract

**Introduction:** Breast cancer is the second most lethal cancer after lung cancer among women, leading to physical, emotional, and appearance-related changes that result in stress and anxiety for these patients. This situation complicates the challenges faced by patients, making the alleviation of these symptoms and the enhancement of their quality of life a significant concern.

**Methods:** This review study was conducted in the first half of 2022, examining articles published between 2009 and 2022. To gather relevant scientific documentation, an electronic search was performed in both Persian and English using keywords such as breast cancer, palliative treatment, yoga and cancer, and relaxation across databases including PubMed, Google Scholar, Scopus, ScienceDirect, and SID.

**Findings:** A total of 70 articles were collected for this study; those without full text access were excluded. Ultimately, 10 relevant articles with strong evidence and high quality were selected, and their data were extracted. Based on the studies within our access range, yoga and spiritual therapy (76%) emerged as the most effective interventional methods for reducing anxiety and stress symptoms and improving the quality of life for patients. Studies indicated that the effectiveness of these methods is attributed to the reduction of cortisol hormone levels in this group of patients.

**Conclusion:** Palliative treatments, in conjunction with modern therapies, are effective in improving the mental well-being of patients with breast cancer. Given the impact and cost-effectiveness of these methods, the establishment of training units for palliative care in hospitals could provide significant support for these patients.

**Keywords:** Cancer, Breast cancer, Palliative treatment



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P-1037

## Religious coping and death depression in Iranian patients with cancer: relationships to disease stage

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### Abstract

**Introduction:** The study investigated relationships among the extent of disease, religious coping, and death depression in Iranian patients with cancer.

**Methods:** A descriptive cross-sectional study was conducted with a convenience sample of 482 Iranian cancer patients. Participants completed demographic and health, death depression, and religious coping surveys.

**Results:** After controlling for demographic and health characteristics, positive and negative religious coping behaviors were significantly related to the experience of death depression. There was an interaction effect between negative religious coping and extent of disease with significant positive relationships to the experience of death depression.

**Conclusions:** Negative religious coping was found to be more closely associated with death depression in patients with earlier stage disease than those with advanced stages of cancer in this sample of patients with cancer from Iran. Findings support assessing patients for use of religious coping strategies. Muslim patients who are religiously alienated and have existential anguish may be vulnerable and need heightened support following diagnosis and during treatment of early stage cancer.

**Keywords:** Cancer, Culture, Death depression, Religious coping, Muslim



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P-1058

## Investigating the impact of cancer stem cell targeting in the process of breast cancer treatment

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### Abstract

**Introduction:** Breast cancer (BC) is a prevalent human malignancy and a very common cause of cancer-related death among women worldwide. Currently, it is considered a multifactorial disease and patients with BC could have a wide range of clinical, pathological, and molecular characteristics. The Cancer Stem Cells (CSCs) hypothesis claims that tumors, as well as normal tissues, are formed from a group of cells called cancer stem cells or “cancer-initiating cells” through asymmetric cell division, simultaneously maintaining the stem population and generating multilineage differentiation. The hypothesis that tumors may originate from a rare population of CSCs has gained tremendous popularity in recent years and is supported extensively by several pioneering works. Cancer therapies targeting CSCs have unlimited potential for relapse free survival of cancer patients. As a result, knowledge of biological pathways that govern CSCs is very important and this review is focused on the biology of CSCs with special emphasis on breast CSCs, and recent advances in therapeutic approaches targeting them. Our aim is to stimulate further study of these agents that could become the basis for their use as stand-alone treatments or components of combination therapies effective against breast cancers.

**Methods:** In this study, the articles published at intervals from 2012 to 2022 in the databases including Web of Science, PubMed, Science direct, Embase, Google scholar, SID and Iran-medex. The keywords including "stem cell", "targeting", "breast cancer", "treatment" were examined. Studies published in English and Persian were considered as eligible.

**Results:** The higher resistance of BCSCs to standard therapies in comparison with other cells of the tumor bulk highlights the need for new therapies targeting the stem population. The identification of breast cancer stem-cell biomarkers may allow for direct assessment of therapeutic effects on this cell population. An agent that only targets cancer stem cells and not bulk tumor cells would be predicted to have only modest effects on tumor size but could have dramatic effects in preventing recurrence in the adjuvant setting. In contrast, agents which primarily affect bulk populations rather than cancer stem cells may cause tumor regression but may be less effective when administered in the adjuvant setting. In addition, cancer stem-cell regulatory pathways are highly interconnected, which suggests that the use of combinations of targeting agents may be necessary to effectively eliminate this cell population. Despite these challenges, the development of stem cell targeted therapeutics has the potential to significantly improve outcome for patients with both early-stage and advanced breast cancers.



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Conclusion: What seems to be increasingly clear is that CSCs are involved in tumor recurrence, metastasization, and drug resistance. Therefore, a high proportion of BCSCs have been associated with poor outcome. For this reason, many studies have focused on BCSCs analysis as well as on the identification of new drugs capable of eradicating this population. The existence of tumor initiating or cancer stem cells within tumors responsible in part of drug resistance and current treatment failure and recurrence. All of the presented targets here might be of use for the development of a BCSC-directed therapy, however we believe a combination of the pharmacological targets would be desirable since BCSC resistant clones may appear because of the selection pressure derived from monotherapy.

**Keywords:** Stem Cell, Targeting, Breast Cancer, Treatment



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P-1005

## The role of Negative pressure wound therapy in wound treatment of cancer patients

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### **Abstract**

**Background:** Negative pressure wound therapy (NPWT) has increasingly been a part of the plastic surgeons because it reduces edema, improves angiogenesis, and promotes granulation formation in a variety of settings. Historically, an absolute contraindication to the use of NPWT is active malignancy due to theoretical risks of increased tumorigenesis, cancer spread, and hemorrhage. However, few studies have evaluated the effects of NPWT on malignant wounds. In contrast, there is evidence that NPWT is beneficial for palliation in malignancy. NPWT use in malignancy has been described as a palliative wound dressing and as temporary coverage before definitive closure. Compared with conventional wound care, NPWT may facilitate improved pain control and a reduction in drainage and malodor. NPWT has also shown to be beneficial in reducing the size of malignant wounds, allowing for eventual closure. This has similarly been demonstrated in radiated metastatic wounds. Several previous studies have demonstrated that NPWT may be of benefit in malignancy settings when used with a palliative intent. In patients at the end of life, measures that reduce pain, malodor, drainage of wounds, and limit trips to the operating room may improve quality of life. Further, although studies are limited and are not necessarily assessing for this, NPWT application to malignant wounds has not been shown to stimulate tumorigenesis or hemorrhage. The use of NPWT for malignant wounds may have utility as a palliative therapeutic intervention to reduce complications associated with the wounds and to increase patient comfort. Dedicated studies are necessary to further evaluate the safety and efficacy of NPWT in malignancy.

**Materials and Methods:** In this systematic review and meta-analysis study, four online databases (PubMed, Scopus, web of Science, ProQuest) from related articles from 2017-2022 were searched for related keywords. The quality of articles was evaluated using the Newcastle-Ottawa (NOS) criterion. This study, comprising a systematic review and meta-analysis, was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement

**Results:** This systematic review and meta-analysis study summarised the available evidence on the effects associated with the application of NPWT for malignant wounds.

**Conclusions:** NPWT is a safe method for accelerating healing and lowering the infection rate of burn wounds. Its use in burn wound and chronic wounds treatment is recommended provided it is applied under appropriate circumstances. Further large-scale RCTs are required to provide more



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evidence of its effectiveness for treating malignant wounds. We consider that, in malignant patients, it can present a key point to accelerate the healing process and stop in end of life patient with cancer.

**Keywords:** nursing, cancer, NPWT, management



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P-1028

## B-cell lymphoma presenting as acute pancreatitis symptoms in a child

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دانشگاه علوم پزشکی بابل - دانشگاه علوم پزشکی بابل

### Abstract

Lymphoma which has a wide range of manifestations is the third malignancy in pediatrics. Nearly, 50% of patients have extranodal involvement. Pancreas can be affected secondarily more than primarily. A 10-year-old boy with recurrent abdominal pain in the epigastric region for six weeks was referred to Amirkola Children's Hospital, affiliated to Babol University of medical sciences (north of Iran). The patient was icteric with elevated levels of amylase and lipase. A hypoechoic mass near the head of the pancreas was detected by ultrasound examination. Pathology of stomach polyps revealed small blue round-cell tumor compatible with a lymphoma. In children with acute pancreatitis symptoms and palpable abdominal mass, the non-Hodgkin lymphomas (NHL) should be considered as an important, though rare possible cause.

**Keywords:** B cell lymphoma, Child, Pancreatitis



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P-1071

## The Evaluation of Antioxidant and Anticancer Properties of Phytolacca amricana Extract on Lung Cancer A549 Cell Line

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### Abstract

Lung cancer is the most common cancers and chemotherapy cancer treatment is one of the methods, but because of the lack of selective cytotoxicity, it leads to the occurrence of intolerable side of the screw. Recently; thus, natural products extracted from medicinal plants play an important role. Thus, the purpose of this research is to determine the antioxidant activity of the extracts of the leaves, fruits, and roots of the Phytolacca americana plant and their inhibitory effect on the growth of A549 lung cancer cells

Materials and Methods: Leaf, fruit, and root of P. amricana were harvested from the region of Ramsar city and dried in shade and then extracted. In the following, A549 cells line was cultivated and proliferated. Then, the cells exposed to different concentrations of the leaf, fruit, and root extracts of P. amricana (31.25 to 4000 µg/ml) were incubated for 24, 48, and 72 hours. After the incubation period, the colorimetric MTT method was used to determine cytotoxicity. Also, total phenol, flavonoid, and anthocyanin contents were determined as well as antioxidant activity of extract using DPPH method.

Results: The results showed that the highest amount of phenol, flavonoid, and total anthocyanin was observed in the fruit extract and the highest antioxidant activity was obtained of the fruit with the concentrations of 150 and 200 mg/ml, respectively 78.03 and 83.80%. Also, the results showed that leaf, fruit, and root extracts at a concentration of 4000 µg/ml within the duration of 72 hours had the greatest inhibitory effect on the growth of cancer cells, which were 92.12, 93.46, and 83.44%, respectively. Conclusion: These results suggest that the extracts of various parts of the P. americana, especially the leaves and fruits, have high antioxidant properties and cytotoxicity against the A549 cell line. Therefore, it may be possible to use the compounds of this plant in pharmacology works with more studies in the future.

**Keywords:** Antioxidant compounds, A549 cells line, Lung cancer, Phytolacca amricana, MTT assay



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P-1115

## Epidemiological investigation of deaths due to cancer in the year 1400 of Mashhad

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### Abstract

According to the information obtained from the system of registering and classifying the causes of death of the residents of Mashhad in the year 1400, out of a total of 23,226 registered deaths, 2,506 were due to cancers and tumors, the number and amount of which is as follows.

Methods: The system of registration and classification of causes of death

Results: Death rate due to cancer

Conclusions: Considering that from the 20 general groups of causes of death (infectious and parasitic diseases, cardiovascular diseases, respiratory system diseases, nutritional and metabolic gland diseases, unintentional accidents, digestive system diseases, transport accidents, period diseases) Birth, urogenital diseases, nervous system diseases, suicide, congenital and chromosomal abnormalities, skin and subcutaneous diseases, violence by others, mental diseases and behavioral disorders, hematopoietic system diseases, musculoskeletal diseases, pregnancy and childbirth complications and symptoms and conditions. poorly defined and vague) cancers and tumors account for a high rate of deaths and environmental and lifestyle factors play a significant role in the occurrence of various types of cancer, and by correcting them, the occurrence of many cancers can be prevented. And in this context, the need for education, lifestyle modification, health behaviors and people's habits seems essential.

**Keywords:** cancer, death, Death registration system



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P-1124

## Women's health literacy in preventive behaviors of gynecological cancers

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### Abstract

**Introduction:** Gynecological cancers, including breast, cervical, ovarian and uterine cancers, are among the most common and deadly cancers around the world. Decisions and actions which people make about their lifestyle behaviors are effected by their level of health literacy. Low health literacy is associated with limited knowledge about cancer screening and lack of desire to do it. Health literacy is an effective factor in increasing health behaviors and improving access to health care and increasing people's control over personal health. Considering the high prevalence of gynecological cancers and the importance of health literacy in the prevention of these cancers, the present study was conducted with the aim of investigating health literacy in the prevention and diagnostic behaviors of gynecological cancers.

**Methods:** The present study was a cross-sectional descriptive analytical study on 470 women who referred to the health centers of Mashhad in 2022 using available sampling method. The tool used was the Functional Health Literacy Questionnaire (S-TOFHLA). Data analysis was done using spss version 25 and descriptive and analytical statistical tests.

**Results:** 48 % of the referring women had insufficient health literacy, 24 % had borderline health literacy and only 28% of the samples had sufficient health literacy. The majority of the participants had a bachelor's degree, were housewives, and had incomes below the subsistence level. Health literacy had a significant relationship with education, income, occupation and age.

**Conclusion:** Inadequate health literacy in participating women is a common problem that has reduced the chances of performing diagnostic and preventive behaviors of gynecological cancers. Moreover, women with good health literacy performed Pap test screening and mammography more than others. Therefore, it is necessary to implement educational interventions to improve women's health literacy

**Keywords:** Health literacy, cancer, breast cancer, gynecological cancers



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P-1154

## Phycocyanin has good potential to inhibit cell proliferation by induction of G0/G1 phase in human squamous carcinoma cell line

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### Abstract

**Background:** Squamous cell lung cancer (SCC) is a type of non-small cell lung cancer (NSCLC), and it is the second most frequent type of lung cancer. It accounts for around 30% of all non-small-cell lung cancer cases. Despite the enormous advancements in lung cancer therapy, significant gaps in the development of new medicines persist. Phycocyanin, a blue pigment with antioxidative and fluorescent properties, has been extensively studied in the therapy of NSCLC cell lines such as A549, H460, H1299, and LTEP-a2. The effects of varying phycocyanin concentrations on viability, death pattern, and expression of the SUFU and bcl-2 genes in normal human dermal fibroblast (HDF) and human squamous carcinoma cell lines (SK-MES-1) were investigated in this work.

**Methods:** The two cell lines In the appropriate media, SK-MES-1 and the HDF normal cell line were cultivated, and various amounts of phycocyanin (172, 375, 750, and 1500 g/ml) were added. After 24 and 48 hours, the MTT assay was used to evaluate metabolic activity. SUFU and BCL-2 gene expression were evaluated by a TaqMan real-time PCR assay, and cell cycle analysis is often carried out using flow cytometry to identify cells in different phases of the cell cycle (G0/G1 vs. S vs. G2/M).

**Results:** After 24 and 48 hours, phycocyanin significantly inhibits the proliferation of SK-MES-1 cells ( $P \leq 0.001$ ). Under treatment with various doses of phycocyanin, SK-MES-1 cells showed reduced SUFU and BCL-2 expression levels. Additionally, phycocyanin treatment caused the G0/G1 phase of the cell cycle to be arrested in SK-MES-1 cell lines.

**Conclusion:** Our findings imply that phycocyanin can influence human squamous carcinoma cell lines and alter their proliferation rate by altering the expression of the SUFU and BCL-2 genes and inducing the G0/G1 phase following treatment. As a result, phycocyanin has the potential to be used as a therapeutic agent for lung cancer.

**Keywords:** Cancer therapy·Phycocyanin·Lung cancer·Cell cycle arrest·G0/G1 phase



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P-1070

## Causes of Missed Nursing Care in Cancer Patients

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Nayereh Salmani

دانشگاه علوم پزشکی شهید صدوقی یزد - دانشگاه علوم پزشکی شهید صدوقی واحد میبد - دانشگاه علوم پزشکی شهید صدوقی واحد میبد - دانشگاه علوم پزشکی شهید صدوقی واحد میبد - دانشگاه علوم پزشکی شهید صدوقی یزد میبد

### Abstract

مقدمه: سرطان یکی از مهم ترین دلایل مرگ و میر در جهان به شمار می آید و فرایند بیماری و درمان های انجام شده نیازمند مراقبت پرستاری مختلف و مداوم است؛ عدم انجام یا تاخیر در انجام مراقبت های مورد نیاز به عنوان مراقبت از دست رفته شناخته می شود که می تواند تبعات منفی از قبیل وخامت وضعیت بالینی بیمار، افزایش مخارج، اشغال تخت های بیمارستان و نارضایتی بیمار را به دنبال داشته باشد. لذا شناسایی عوامل موثر در وقوع مراقبت پرستاری از دست رفته موضوعی حائز اهمیت است و این مطالعه با هدف شناسایی علل مراقبت های پرستاری از دست رفته در بیماران مبتلا به سرطان انجام شده است.

روش جستجو: در مطالعه مروری حاضر کلید واژه های سرطان، مراقبت های از دست رفته، پرستاری، بخش آنکولوژی، گوگل، Scopus، PubMed، SID در پایگاه های اینترنتی cancer، missed care، oncology units، nursing care اسکولار در محدوده زمانی ۲۰۱۰ تا ۲۰۲۳ مورد جستجو قرار گرفتند. در مجموع ۳۰ مقاله یافت شد که از این بین ۵ مقاله که فول قابل دسترس نداشت، به زبان غیر فارسی یا غیر انگلیسی بود و در نوبت انتشار بود از مطالعه خارج و در نهایت ۲۵ مقاله مورد بررسی قرار گرفت.

یافته ها: نتایج مطالعات حاضر عوامل موثر بر مراقبت از دست رفته را به دو دسته درونی و بیرونی تقسیم کرده اند. عوامل درونی شامل: سهل انگاری، بی ارزش شدن برخی از جنبه های مراقبت، عدم رعایت اصل عدالت در ارائه مراقبت، تصمیم گیری بر اساس علائق و احساسات شخصی و کاهش علم و مهارت بالینی پرستاران می باشد. عوامل خارجی شامل: کمبود منابع انسانی، فقدان هماهنگی و برنامه ریزی سازمانی، فقدان برنامه آموزشی مستمر، عدم توجه به نظرات و نیازهای پرستاران در هنگام اتخاذ تصمیمات، جو اخلاقی حاکم در محیط کار، رویکرد مدیریت تنبیهی، عدم بکارگیری پرستاران متخصص برای ارائه مراقبت های خاص، عدم تامین تجهیزات و لوازم مورد نیاز، اختلال در کار تیمی و فقدان روش مناسب برای ارزیابی مراقبت های از دست رفته می باشد.

نتیجه گیری: بر اساس یافته های بدست آمده به نظر می رسد جهت کاهش وقوع مراقبت پرستاری از دست رفته در بخش های آنکولوژی لازم است بر حسب علل شناسایی شده راهکار هایی متمرکز بر رفع علل درونی و بیرونی از قبیل تقویت مهارت های بالینی و ارتباطی پرستاران، برگزاری کارگاه های آموزشی مستمر با تمرکز بر انواع مراقبت پرستاری، تقویت رعایت اخلاق حرفه ای پرستاران، افزایش تعداد نیروی متخصص و تامین وسایل و تجهیزات کافی برای ارائه مراقبت مورد استفاده قرار گیرند. همچنین انتظار می رود که مسئولین و اساتید، پرستاران را متقاعد کنند که در هنگام ارائه مراقبت های پرستاری بر رفاه عمومی همه ذینفعان و برابری و عدالت تمرکز کرده و بر اساس علائق فردی یا احساسات شخصی تصمیم گیری نکنند.

**Keywords:** مراقبت از دست رفته، پرستاری، سرطان



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P-1109

## Incidence of Colorectal Cancer and Adenomatous Polyps After a Two-Step Screening in Isfahan Province, Iran in 2022

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### Abstract

**Background:** Purpose The aim of this study was to estimate the incidence of colorectal cancers in Iran. The results of this study are based on a screening program that is being implemented in Isfahan province.

**Methods:** In this study, about 139,000 people were screened for colorectal cancer and adenomatous polyps in 2 steps during the year 2022.

**Results:** Based on the findings of this study, the incidence of adenomatous polyps was reported to be 402 (95% CI, 389–432) per 100,000 population. The incidence of adenomatous polyps was reported to be 498 (95% CI, 476–540) and 328 (95% CI, 306–362) in men and women, respectively ( $p < 0.001$ ). Also, the incidence of colorectal cancer was reported to be 39 (95% CI, 28–49) per 100,000 population. The incidence of colorectal cancer in men and women was reported to be 43 (95% CI, 34–56) and 29 (95% CI, 17–34), respectively, indicating a statistically non-significant difference ( $p = 0.31$ ).

**Conclusions:** Based on the result of this study, despite a low participation rate of the target population in the screening program, the incidence of adenomatous polyps and colorectal cancer is relatively high in the average-risk population.

**Keywords:** Screening•polyps•Colorectal•cancer



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P-1094

## Experiences of women with breast cancer and their spouses of spouse's unsupportive behaviors: a phenomenological study

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علوم پزشکی بیرجند

### Abstract

مقدمه: عدم برآورده شدن نیازهای فیزیکی و روانشناختی بیماران دچار سرطان پستان و همسرشان می تواند منجر به بروز اضطراب و افسردگی و مشکلات زناشویی شود. این مطالعه با هدف تعیین تجارب زنان مبتلا به سرطان پستان و همسرشان از رفتارهای غیرحمایتی همسر انجام شد.

روش کار: با استفاده از روش نمونه گیری هدفمند به تبیین تجربیات زنان دچار سرطان پستان از رفتارهای غیرحمایتی همسر از دیدگاه ۹ زن دچار سرطان پستان و ۶ مورد همسر بیماران پرداخته شد. داده ها با استفاده از مصاحبه های عمیق انفرادی و یادداشت برداری جمع آوری گردید.

یافته ها: مطالعه حاضر یک مطالعه کیفی با رویکرد پدیدارشناسی به منظور درک تجربه زنان مبتلا به سرطان پستان و همسرشان از رفتارهای غیرحمایتی همسر می باشد. تحلیل داده های کیفی مربوط به تجارب زنان دچار سرطان پستان و همسرشان منجر به شکل گیری ۵ مضمون اصلی در زنان و ۲ مضمون اصلی در همسرشان گردید که شامل: واماندگی مالی، فقر عاطفی و از هم پاشدگی زندگی مشترک، نقصان ارزش وجودی به عنوان یک زن، و در همسر بیماران: سردی و انجماد زندگی زناشویی، خشونت شریک زندگی؛ بود.

نتیجه گیری: معمولاً مراقبان مرد کمتر همسر خود را درک می کنند. بنابراین، متخصصان بهداشت باید توجه بیشتری داشته باشند و به مردان کمک کنند تا با این بیماری کنار بیایند و رنج همسران خود را تحمل کنند. همچنین زنان نیز بصورت متقابل در تمام مراحل بیماری از همسرشان حمایت کنند و احساساتشان را درک کنند.

**Keywords:** رفتارهای غیر حمایتی همسر، مطالعه پدیدار شناسی، سرطان پستان



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P-1098

## Investigating the factors that change the risk of breast cancer in menopause

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### Abstract

مقدمه: در سطح جهانی، سرطان پستان شایع ترین بدخیمی تشخیص داده شده در زنان و دومین علت شایع مرگ و میر ناشی از سرطان زنان در جهان است. برنامه های ملی در بسیاری از کشورها برای مبارزه با سرطان ایجاد شده است، که در آنها بر پیشگیری تاکید می شود که به کاهش عوارض و مرگ و میر ناشی از سرطان کمک می کنند. هدف این مطالعه تعیین ریسک فاکتورهای سرطان سینه در زنان یائسه بود.

پرداخته است. کلیه مقالات مروری، Uptodate و Pubmed روش: این مطالعه مروری به بررسی مطالب موجود در مداخله ای و توصیفی از سال ۲۰۱۵ تاکنون در مطالعه وارد شد. برای جستجوی مطلب از کلمات کلیدی سبک زندگی، Pubmed و تعداد ۸ مقاله در Uptodate سرطان سینه و یائسگی در عنوان مقالات استفاده شد. در نهایت مطالب موجود در مورد مطالعه قرار گرفت.

یافته ها: عوامل مرتبط با خطر بالاتر برای سرطان سینه شامل موارد زیر است: سن بالاتر، جنسیت مونث، وضعیت پایین بالاتر یا افزایش وزن در سنین بعد از یائسگی، افزایش کلسترول، قد بلند، ضایعات BMI اجتماعی-اقتصادی، نژاد سفید، پرولیفراتیو پستان، تراکم بافت پستان، تراکم استخوان بالاتر، تراکم بالاتر استخوان هیپ. در مورد عوامل خطر هورمونی، خطر بالاتر در موارد زیر مشاهده می شود: هورمون درمانی، استروژن مترشحه داخلی، استفاده اخیر از قرص های ضد بارداری، افزایش تستوسترون، افزایش فاکتور رشد انسولین-۱، قاعدگی زودتر یا یائسگی دیرتر. همچنین نولی پاریتی، سن بالاتر در زمان اولین بارداری ترم، سابقه شخصی و خانوادگی سرطان سینه، مصرف الکل، مصرف سیگار و گوشت قرمز، اقامت در آمریکای شمالی، استرالیا/نیوزیلند، و در غرب و شمال اروپا و قرار گرفتن در معرض تشعشعات تشخیصی از عوامل خطر است.

عوامل مرتبط با کاهش خطر سرطان سینه شامل: پیشگیری از شیمی درمانی با مهارکننده های آروماتاز در زنان یائسه، طول مدت شیردهی، فعالیت بدنی، کاهش وزن، الگوی غذایی کم چرب در زنان یائسه، مصرف میوه، سبزیجات و غلات، سویا/ فیتواستروژن، مصرف فیبر، ویتامین، داروهای ضد التهابی غیر استروئیدی، ناباروری ناشی از اختلالات تخمک گذاری و مصرف لیگنان و غذاهای غنی از لیگنان، ترکیب و فعالیت میکرو فلور روده بود.

عواملی که بر خطر ابتلا به سرطان سینه تأثیر نمی گذارند شامل سقط جنین، مصرف کافئین، لقاح آزمایشگاهی، کاشت پستان های زیبایی و رنگ های مو با افزایش خطر ابتلا به سرطان سینه مرتبط نیستند.

نتیجه گیری: پیشگیری از سرطان در حال حاضر نقش کلیدی در مبارزه با این بیماری ایفا می کند. اصلاح رفتار و همچنین آگاهی بیشتر زنان در مورد سرطان سینه، ممکن است به طور قابل توجهی در کاهش بروز این سرطان نقش داشته باشد. از آنجا که اطلاعات بیشتر به کاهش بروز بیماری و درمان بهتر آن کمک می کند به منظور کاهش خطر بروز سرطان سینه می توان از نتایج حاصل از این مطالعه برای آموزش افراد جامعه استفاده کرد.

**Keywords:** سرطان سینه، یائسگی، زنان



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P-1101

## The effect of palliative care on the quality of life of the elderly with cancer

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### Abstract

مقدمه: سرطان از بیماری های شایع دوران سالمندی و یکی از مخربترین اتفاقات زندگی است. سالمندان مبتلا به سرطان بیشتر از سایر بیماران نیازمند مراقبتهای تسکینی هستند. با توجه به شیوع زیاد سرطان و همچنین رشد فزاینده پدیده سالمندی و اینکه این افراد کیفیت زندگی پایین تری در مقایسه با افراد عادی دارند، لذا مطالعه حاضر با هدف تاثیر مراقبت تسکینی بر کیفیت زندگی سالمندان مبتلا به سرطان در مراحل پایان زندگی انجام شد.

روش ها: در مطالعه مروری سیستماتیک حاضر، کلیدواژه های سرطان، مراقبت تسکینی، کیفیت زندگی، سالمندان و معادل روش ها: در مطالعه مروری سیستماتیک حاضر، کلیدواژه های سرطان، مراقبت تسکینی، کیفیت زندگی، سالمندان و معادل آنها palliative care, cancer. Quality of life, elderly در پایگاههای الکترونیکی SID, Magiran, Medex Iran, PubMed, Scholar Google جستجو شدند تا ۲۰۲۳ تا ۲۰۱۰.

یافته ها: نتایج ارزیابی مطالعات نشان داد که برای بهبود کیفیت زندگی و همچنین مدیریت آثار منفی متعدد این بیماری در تمام ابعاد سلامتی و خانوادگی سالمندان مبتلا به سرطان میتوان از رویکردهای جدید مانند شأن درمانی، کرامت درمانی، سلامت معنوی (دین و دعا و نماز)، درمان پذیرش و تعهد استفاده نمود. این روش ها به بیماران صعب العلاج، امید و قدرت مبارزه برای زندگی را میدهد و میتواند در کنار مداخلات پزشکی یا جراحی در این شرایط، یک مراقبت حمایتی و تسکینی تلقی شود که منجر به ارتقاء کیفیت زندگی آنها می گردد. همچنین در برخی مطالعات نشان داده شد که روابط اجتماعی، فعالیت های روزمره، وضعیت مالی و سطح تحصیلات بیمار میتواند در کیفیت زندگی و مراقبتهای تسکینی مسمر ثمر باشد.

نتیجه گیری: با توجه به یافته های مطالعه حاضر، نمی توان برای بهبود کیفیت زندگی و مراقبت تسکینی بیماران سالمند سرطانی فقط به درمان های دارویی و جراحی تکیه نمود؛ لذا پیشنهاد می شود برای نتیجه بهتر در این امر از روش های گفته شده بهره برده تا بیمار به یک زندگی غنی، کامل و معنادار دست یابد و در عین حال سختی و رنج های بیماری را بپذیرد.

**Keywords:** مراقبت تسکینی، سالمندان، سرطان، کیفیت زندگی



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P-1103

## Reproductive factors associated with breast cancer risk: A Hospital-Based Case-Control Study

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### Abstract

#### Introduction

Breast cancer is the most common cancer in women worldwide and the leading cause of cancer death among women. Breast cancer still persists as an international health burden despite advances in its early diagnosis, treatment and also increased knowledge of its established risk factors.

#### Methods

This retrospective hospital based Case-Control was conducted on women living in south of Iran. In this study, 500 women were included, 150 in the case group and 300 in the control group. Information on reproductive and anthropometric characteristics was obtained using an questionnaire and the cancer registry database of the clinic. Multinomial logistic regression was used and odds ratios (ORs) and 95% confidence intervals (CIs) were calculated.

#### Results

The mean age of cases and controls were 42.6 and 41.9, respectively. the univariate analysis shown that Age at 1st pregnancy, Menarche age, Abortion, Duration of breast feeding, Number of live births, Family history, Regular menstruation and Number of pregnancies have a significant relationship with breast cancer. On the other hand, the adjusted odds ratio showed that having higher age at first pregnancy, fewer parity, history of abortion and first pregnancy at an older age were associated with increased breast cancer risk.

#### Conclusion

There was a significant association between Some Reproductive factors and breast cancer. According to the findings of our study, women who have these types of risk factors are advised to pay special attention to breast cancer screening.

**Keywords:** Reproductive factors, pregnancy, breast cancer, Abortion



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P-1129

## Risk of breast cancer after hysterectomy: a systematic review

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### Abstract

مقدمه و هدف: خطر سرطان پستان در زنان با استعداد ژنتیکی، به طور گسترده بررسی شدند، و دستورالعمل هایی برای انجام سالپنگو برداشتن تخمدان ها دوطرفه در افراد با خطرات ژنتیکی خاص وجود دارد. اما خطر ابتلا به سرطان پستان در زنانی که برای نشانه های خوش خیم تحت هیستریکتومی با یا بدون سالپنگو برداشتن تخمدان ها دوطرفه قرار می گیرند، محدود است. میزان جراحی زنان از جمله هیستریکتومی با یا بدون برداشتن تخمدان ها شایع می باشد، به طوریکه میزان هیستریکتومی ۱۳٫۸٪ و برداشتن تخمدان ها دوطرفه با یا بدون هیستریکتومی ۱۸٫۱٪ می باشد. مطالعه مروری حاضر با هدف بررسی خطر ابتلا به سرطان پستان به دنبال هیستریکتومی با و بدون سالپنگو برداشتن تخمدان ها دوطرفه برای اندیکاسیون های خوش خیم انجام شد.

این مطالعه به صورت مرور سیستماتیک بر مقالات چاپ شده خطر ابتلا به سرطان پستان پس از هیستریکتومی انجام روش شد. جهت جستجو مطالعات، از کلمات کلیدی

"Breast Cancer" "Breast Neoplasms" "Hysterectomy" "Salpingo-oophorectomy"

استفاده شد. در معیارهای ورود به مطالعه، مقالات چاپ شده با PubMed، ISI و Scopus و در پایگاههای اطلاعاتی متن کامل و به زبان انگلیسی از سال ۲۰۰۰ تا آوریل ۲۰۲۳ که خطر ابتلا به سرطان پستان پس از هیستریکتومی با و بدون برداشتن تخمدان ها را در موارد خوش خیم ارزیابی کردند، انتخاب شدند. هم چنین مقالات نامیه به سردبیر و کنفرانس ها از مطالعه خارج شدند. ابتدا تمام مقالات استخراج شده با کلمات کلیدی از سه پایگاه اطلاعاتی ذکر شده، وارد اندنوت شده و مقالات تکراری حذف شدند. در ادامه مقالات نهایی که ارتباط خطر ابتلا به سرطان پستان را با هیستریکتومی در زنان گزارش دادند، بررسی شدند. از مقالات نهایی انتخاب شده، اطلاعاتی مانند نام نویسنده، سال و مکان انجام مطالعه، حجم نمونه و احتمال خطر سرطان پستان بعد از هیستریکتومی با و بدون افورکتومی استخراج گردید.

و ۷۶۲ مقاله از پایگاه Web of Science در ابتدا ۲۵۶۸ مقاله از سه پایگاه اطلاعاتی، ۲۰۳ مقاله از پایگاه یافته ها وارد مطالعه شدند. پس از بررسی های نهایی با توجه به معیارهای ورود Scopus از پایگاه اطلاعاتی ۱۶۰۳ PubMed و مقالات مرتبط، ۵ مقاله با ۱۰۱۵۳۳۴ نمونه انتخاب شدند. این مطالعات در کشورهای آمریکا و استرالیا و طراحی مطالعات بصورت کوهورت و مورد-شاهدی بود. نتایج حاصل از استخراج اطلاعات ۵ مقاله انتخاب شده، نشان داد که در چهار مطالعه، در زمان قبل از یائسگی، هیستریکتومی تنها یا همراه با برداشتن دوطرفه تخمدان ها، خطر ابتلا به سرطان پستان کاهش می دهد. البته قابل ذکر است که هیستریکتومی همراه با برداشتن تخمدان ها، نسبت به هیستریکتومی ساده (بدون برداشتن تخمدان ها) خطر سرطان پستان را به میزان بیشتر کاهش می دهد (جدول ۱). اما در یکی از مطالعات هیستریکتومی به تنهایی میزان سرطان پستان را افزایش داد.

بحث و نتیجه گیری: نتایج این مطالعه نشان داد که هیستریکتومی همراه با برداشتن دو طرفه تخمدان ها در مقایسه با هیستریکتومی به تنهایی (در موارد خوش خیم) خطر کمتری برای سرطان پستان داشتند. البته برای نتایج قطعی نیاز به مطالعات بیشتری و از کشورهای مختلف جهان نیاز هست. در توجیه ان می توان گفت که زنانی که تحت برداشتن تخمدان ها دوطرفه قرار می گیرند سطوح استروژن کاهش می یابد. از آنجایی که استروژن رشد سلول های پستان را تحریک و احتمال افزایش خطر ابتلا به سرطان سینه در طول زمان دهد، سطوح بالا استروژن به عنوان یک عامل خطر ثابت برای سرطان پستان در نظر گرفته می شود. بنابراین، جراحی که استروژن را تا حد زیادی کاهش می دهد، می تواند به طور قابل قبولی خطر را کاهش دهد. با



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این حال، عواقب سلامتی ناشی از قطع ناگهانی هورمون و کمبود استروژن نیز وجود دارد. بنابراین می بایست زنان در مورد خطرات و مزایای برداشتن تخمدان ها در زمان جراحی مشاوره شوند.

**Keywords:** هیسترکتومی، سالپنگو او فوررکتومی، سرطان پستان



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P-1116

## Perceived spouse unsupportive behaviors in women with breast cancer and their spouses

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### Abstract

**Introduction.** Unsupportive responses from relatives, particularly spouses, play a significant role in the psychological adjustment of breast cancer patients and their spouses. Failure to meet the physical and psychological needs of breast cancer patients and their spouses can lead to anxiety, depression, and numerous marital problems. The aim of this study was designed to describe perceived spouse unsupportive behaviors in women with breast cancer and their spouses.

**Material and methods.** This is a cross-sectional study. A total of 220 women with breast cancer along with their husbands participated in this study through random sampling. In the present study, data collection was performed using a demographic information checklist and a questionnaire.

**Results.** The mean perceived women's unsupportive behavior ( $20.73 \pm 8.44$ ) was higher than that of men's ( $18.80 \pm 5.83$ ), which was statistically significant ( $p = 0.003$ ). The mean score of perceived women's unsupportive behavior in the categories of marital status, companion, place of residence, men's and women's occupation, and the type of residential house, and the mean score of perceived men's unsupportive behavior in the category of current treatment were different.

**Conclusions.** Women perceive their spouses' behaviors as less supportive than their spouses' perceptions of women's behavior, which highlights the need for husbands to be more attentive to the impact of their behavior on their wives. Furthermore, talking with each other about problems is the most imperative factor in perceiving support by couples; accordingly, it can be concluded that couples who are reluctant to talk to each other concerning the problem perceive less mutual support.

**Keywords:** unsupportive behavior, breast cancer, nursing, spouse



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شمال

P-1002

## Prevention of cancer by lifestyle modification based on the teachings of Persian medicine

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### **Abstract**

**Background:** Introduction: Cancer has long been a dangerous and deadly disease with unknown mechanisms that plagues mankind. Every year at least 9 million people get cancer and 5 million people die from it. In developed countries, the costs of cancer treatment and control are almost twice the costs of other diseases. Currently, cancer is the cause of one-tenth of deaths worldwide, and in the future, this rate will increase in most countries, while one-third of cancers can be prevented by modifying lifestyles, and one-third of them are potentially curable. The purpose of this article is to prevent cancer by modifying the lifestyle based on the teachings of Persian medicine.

**Methods:** This article is written in a descriptive-analytical method and in a library style.

**Results:** According to Persian medical texts, there are 6 essential principles under the title of principles of hygiene, which include hygiene in the areas of air and living environment, nutrition, physical activity, sleep and wakefulness, psyche and balance of substances in the body (maintenance of essential substances for the body and disposal of waste materials from it) is emphasized, which is completely consistent with new findings in the field of cancer prevention and control.

**Conclusions:** Recognizing and promoting the principles of hygiene in Persian medicine can not only effectively play a role in the prevention of cancer and its incidence; but it can also be very helpful in its control and treatment.

**Keywords:** Persian medicine, cancer, lifestyle, prevention



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P-1072

## Radiomics: a developing field for better prognosis and diagnosis of lung metastasis patients

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### Abstract

**Background:** About 20-54% of metastatic patients experience lung metastasis (LM) as the second most common site for metastasis in cancer patients. The most common extra-thoracic cancers that lead to LM are breast, colorectal, renal, uterine cancer, leiomyosarcoma, and head and neck carcinoma. The most important challenge is to differentiate the primary or benign lung lesions from LM. Common diagnostic methods for the issue are multidetector computed tomography (MDCT) and 18-fluorodeoxyglucose positron emission tomography/computed tomography (18F-FDG PET/CT). Despite the multiple advantages of these two imaging modalities, they could confront false positive or false negative results. On the other hand, biopsy as the gold standard to distinguish between primitive lung tumors or LM is highly invasive and not applicable to all cases. Radiomics is an active area of research to extract quantitative data from diagnostic images, which can serve as useful imaging biomarkers for more effective and customized patient care. Our purpose is to review the current applications of radiomics for lesion characterization, treatment planning, and prognostic assessment in patients with LM.

**Methods:** The keywords of “radiomics”, “metastasis OR metastases”, “machine learning”, and “lung OR pulmonary” were entered into scientific databases of Google Scholar, Scopus, PubMed, and Elsevier. Finally, 8 fully relevant papers (publication year: 2018-2022) were extracted and reviewed.

**Results:** The number of patients evaluated in the 8 studies was variable between 51 and 769. The studies could be categorized into 1. Studies distinguishing histological subtypes of the LM (n = 6), 2. Studies evaluating the mutational status of the LM (n = 1), and 3. Studies evaluating the prognostic ability of radiomics (n = 1). In all papers, the imaging modality was CT or 18F-FDG PET/CT. The segmentation process of the metastatic lesions was conducted manually or semi-automatically using artificial intelligence approaches. In all papers, the machine learning methods' performance in distinguishing histological subtypes or evaluating the mutational status and prognostic ability was variable (poor performance with AUC=0.57 to excellent performance with AUC=0.98).

**Conclusions:** Despite the potential of overcoming the conventional imaging methods for LM patient management, radiomics is not still well adopted clinically. This could be due to several factors such as the standardization of imaging parameters and radiomics features definitions.

**Keywords:** Lung metastasis, Radiomics, Machine learning



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P-1092

## Reflexology in patient with cancer: systematic review

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### Abstract

هدف: رفلکسولوژی یکی از شاخه های درمانی طب مکمل می باشد که بر اساس اصل ایجاد آرامش و التیام با اعمال فشار سیستماتیک به نقاط رفلکس خاصی که عمدتاً در پاها و همچنین در دستها قرار دارند، بنا شده است. با توجه به اینکه بیماران مبتلا به سرطان، به طور معمول دامنه ای از علایم درد و انواع متفاوت ناراحتی های جسمی و روانی را تجربه میکنند، لزوم استفاده از درمانهای مکمل از جمله رفلکسولوژی اهمیت زیادی می یابد. از این رو پژوهش حاضر با هدف شناسایی آثار رفلکسولوژی در بیماران مبتلا به سرطان با مروری بر مطالعات گذشته انجام گردید.

روش: Reflexotherapy، Reflexology مطالعه حاضر یک مطالعه مرور سیستماتیک است. جستجو با کلیدواژه های 'cancer'، 'Reflexology'، 'Magiran'، 'SID'، 'PubMed'، 'Scopus'، 'Iranmedx'، 'Google Scholar' در پایگاههای الکترونیکی 'Science direct' انجام گردید. در نهایت مقالات منتشر شده در سال های ۲۰۱۲ تا ۲۰۲۲ جمع آوری گردید.

یافته ها: مطالعات مورد بررسی نشان داد این روش، بر درد، حالت تهوع، افسردگی، اضطراب و تنگی نفس در بیماران سرطانی تأثیر دارد. رفلکسولوژی می تواند با ایجاد آرامش عمومی، استرس را کاهش داده و در کاهش درد مفید باشد. و نهایتاً به بهبود کیفیت زندگی آنها کمک کند. مقالات مورد بررسی، گزارش مهمی در مورد اثرات نامطلوب ناشی از رفلکسولوژی گزارش ندادند. از آنجایی که رفلکسولوژی مبتنی بر تکنیک های دستی ساده است که نیازی به دارو یا مداخله تهاجمی ندارد، یک روش بی خطر تلقی می شود.

نتیجه گیری: با توجه به سادگی و کم هزینه بودن رفلکسولوژی، این روش درمانی بعنوان یک مراقبت حمایتی و مؤثر بی خطر و ارزان، میتواند در کنار سایر درمانها در بیماران مبتلا به سرطان استفاده شود.

**Keywords:** رفلکسولوژی، سرطان، رفلکسوتر اپی



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P-1110

## Social support in women with breast cancer

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### Abstract

مقدمه: سرطان پستان، شایعترین بدخیمی است، که کیفیت زندگی زنان را تحت تاثیر قرار می دهد. حمایت اجتماعی، مهارتهای سازگاری با عوارض روحی و روانی این بیماری، را تسهیل کرده و راهبردهای سازگاری فعال را ارتقا میدهد. با توجه به شیوع و اهمیت سرطان پستان، و تاثیر آن بر کیفیت زندگی زنان، مطالعه حاضر با هدف مروری بر حمایت های اجتماعی در زنان مبتلا به سرطان پستان، انجام شد.

روش کار: در این مطالعه مروری کلیه مقالات چاپ شده در بازه زمانی ۲۰۲۲-۲۰۱۰ به دو زبان فارسی و انگلیسی دارای ، با کلید Pubmed ، google scholar ، Medlib ، Magiran ، Iran Medex ، SID متن کامل از طریق پایگاه داده های ویژه های سرطان پستان، حمایت اجتماعی، سبک زندگی و معادل انگلیسی ، مورد جستجو قرار گرفتند. پس از بررسی اولیه و جستجو بر اساس فهرست منابع در مجموع ۱۰ مقاله فارسی و ۳۰ مقاله انگلیسی وارد مطالعه شدند.

نتایج: زنان حدود نیمی از جمعیت دنیا را تشکیل می دهند و سلامت آنان از اهمیت خاصی برخوردار است. سرطان پستان شایع ترین بیماری بدخیمی، در زنان زیر ۶۰ سال و دومین علت مرگ در میان زنان، پس از سرطان ریه می باشد. پایین تر بودن میانگین سنی سرطان پستان در زنان ایرانی از یک سو و لزوم افزایش بقای این گروه از سوی دیگر، نشاندهنده ضرورت پرداختن به جنبه های مختلف سلامت آنان، از جمله کیفیت زندگی و مسایل روانشناختی آنان است. سرطان پستان میتواند اثرات عمیقی بر عملکردهای مختلف زنان در زندگی داشته باشد. با توجه به اینکه شیوع این بدخیمی در نقاط مختلف دنیا بسیار متفاوت است، حمایت اجتماعی، در راستای سازگاری با استرس های عمده مؤثر بر سلامتی و کیفیت زندگی افراد، تأثیر مثبت خواهد داشت. به عبارت دیگر حمایت اجتماعی می تواند در سازگاری روانشناختی افرادی که با استرس های عمده سلامتی مواجه می شوند، مداخله کند و با افزایش درک صحیح از رویدادهای استرس زا، باعث کاهش تأثیر فشار روانی و افسردگی شده و عوارض ناشی از یک تجربه ناخوشایند را به حداقل برساند. به عبارتی دیگر، حمایت اجتماعی، تعامل بین ارایه دهنده و دریافت کننده حمایت است. سه نوع تعاملات اجتماعی حمایتی عاطفی، اطلاعاتی و ابزاری، مهارتهای سازگاری را تسهیل کرده و راهبردهای سازگاری فعال را ارتقا داده و افراد را جهت تطابق با تغییرات زندگی کمک می کند. با توجه به نتایج مطالعات، رابطه مستقیم و معکوس بین حمایت اجتماعی و استرس مربوط به سرطان وجود دارد و استرس درک شده و حمایت اجتماعی از عوامل بسیار مهم تأثیرگذار بر سرطان پستان می باشند.

نتیجه گیری: با توجه به شیوع سرطان پستان و تاثیر نامطلوب این بدخیمی بر کیفیت زندگی افراد، ضرورت تأمل و پرداختن به این موضوع از طریق شناخت عوامل مؤثر بر سرطان پستان در جهت کاهش شیوع و مرگ و میر و کیفیت زندگی ناشی از آن ضروری می باشد. با افزایش حمایت اجتماعی افراد و کاهش استرس آنها، می توان تا حدود بسیار زیادی مشکلات ناشی از سرطان پستان را کاهش داد. بنابراین تأکید بر ضرورت توجه بیشتر به افزایش حمایت اجتماعی و کاهش استرس در دختران و زنان روشن می گردد، در نهایت می توان با آموزش روش های حمایت اجتماعی به خانواده ها و تشکیل جلسات مشاوره گروهی برای بیماران مبتلا به سرطان پستان می توان میزان آسیب در این بیماران را کاهش داد.

**Keywords:** سرطان پستان، حمایت اجتماعی، سبک زندگی



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شمال

P-1112

## Early detection of lung cancer

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دانشگاه آزاد اسلامی واحد مشهد - دانشگاه آزاد اسلامی واحد مشهد - دانشگاه آزاد اسلامی واحد مشهد - دانشگاه آزاد اسلامی واحد مشهد

### Abstract

**Background:** Lung cancer is undoubtedly one of the most serious health issues of the 21<sup>st</sup> century. The vast majority of lung cancer patients present with advanced-stage of pathological process that ultimately leads to poor prognosis and a five-year survival rate less than 20%. Thus, to better understand lung cancer, the examination of downstream changes occurring at the level of the protein and metabolites might provide helpful information about the disease. Lung cancer is associated with specific molecular changes in the tumor cell of origin as well as changes in the host that are potentially useful for lung cancer screening.

**Method:** this study was a review study that conducted by using PubMed by using keywords of Lung cancer, Early detection, Screening. Finally, 13 out of 18,567 results up to 2023 were examined in detail.

**Results:** Globally, smoking is identified as the primary cause of lung cancer. The early detection of lung cancer has been a difficult goal to attain for decades. Lung cancer screening criteria has expanded to include: patients age 50-80, >20pkyr smoking history or current smoker, former smoker having quit within 15yrs. Multiple new methodologies incorporating genomics are identifying metabolites and miRNA of lung cancer tumors, offering hope for earlier detection. Early and accurate screening and analysis using cost-effective means are urgently needed to effectively diagnose the disease, improve the survival rate or to reduce mortality and morbidity associated with lung cancer patients. However, genomics remains relatively limited in predicting disease onset, mainly because genomic information does not account for the dynamic environmental influences (phenotype). Sputum cytology is the classic screening method for centrally located early squamous lung cancer. Liquid biopsy could become an alternative and complementary screening approach to chest imaging for early diagnosis of lung cancer. Plasma-based detection of lung cancer DNA methylation may provide a simple cost-effective method for the early detection of lung cancer. However, only 16% of patients were diagnosed when the disease was still restricted to the lungs and even for these, only 57.4% survived 5 years. It is evident that the sooner lung cancer is diagnosed, the better the prognosis for the patient.

**Conclusions:** Naturally, attempts have been made to improve the diagnostic value of potential biomarkers using different combinations (of markers and algorithms), aiming to develop a product that would complement current gold standard diagnostic methods for lung cancer. For lung cancer screening protocols, DNA methylation in plasma/sputum should be used alongside LDCT in large-scale population-based studies to develop novel screening algorithms that decrease the rate of false



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positives. patients at the highest risk for lung cancer and serve as a viable alternative to molecular and proteomic-based markers for the early detection of lung cancer. Therefore, developing a low-cost, high-throughput metabolomic test will make early-stage lung cancer screening feasible and affordable globally, where survival rates are low, particularly for at-risk populations.

**Keywords:** Early detection•Liquid biopsy•LDCT•Lung cancer



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P-1130

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### Abstract

توسعه داده شده است. (Open AI) توسط یک شرکت تحقیقاتی هوش مصنوعی به نام Chat GPT مقدمه: چت جی پی تی ( ) است که می تواند زبان طبیعی انسان را پردازش کند و پاسخی ایجاد کند. AI این یک فناوری چت بات هوش مصنوعی (Transformer از مدل زبان ChatGPT سؤالی بپرسید، و آن به شما پاسخ می دهد. Chat GPT به زبان ساده - می توانید از برای تولید پاسخ های معنی دار و پاسخ های طبیعی استفاده می کند. با توجه به سوال کاربر، این سیستم با استفاده از الگوریتم های هوش مصنوعی پاسخ مناسبی را در اختیار کاربر قرار می دهد. این مدل ها می توانند متن را با در نظر گرفتن تمام کلمات یا نشانه های جمله و وابستگی بین آنها پردازش کنند. به طور کلی، مدل زبان ترانسفورماتور با استفاده از شبکه های عصبی کانولوشن می تواند زبان طبیعی را با دقت و سرعت بالایی در مقایسه با روش های پردازش قبلی پردازش کند.

مواد و روش ها: این مقاله به روش کتابخانه ای و با جستجو در اینترنت، پایگاه های اطلاعاتی و با استفاده از کتاب ها و مجلات تخصصی در این زمینه انجام شده است.

، قابلیت های آن در پیشگیری و کنترل سرطان و کمک به افراد در زمینه ChatGPT یافته ها: با توجه به تحلیل فناوری خودمراقبتی و ارائه پاسخ های مناسب در زمینه اطلاعات دارویی مورد نیاز افراد جامعه، امکان گفتگو با بیماران سرطانی و همراهان بیماران سرطانی در خصوص ارائه خدمات مشاوره مراقبتی، جستجو و ارائه اطلاعات در مورد نیاز های افراد در حوزه سلامت و سایر قابلیت ها شناسایی شد.

نتیجه گیری: هدف اصلی هوش مصنوعی بهبود عملکرد ماشین ها در انجام کارهایی است که نیاز به تفکر دارند. از هوش مصنوعی می توان در پیشگیری و کنترل بیماری سرطان از طریق اطلاعات مناسب می تواند به توسعه سلامت در جامعه کمک کند.

**Keywords:** (پیشگیری، کنترل، سرطان ChatGPT چت جی پی تی



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P-1147

## Diagnosis of gestational breast cancer- Review study

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دانشگاه علوم پزشکی کاشان

### Abstract

مقدمه: سرطان پستان حاملگی یا مربوط به بارداری وقتی تعریف می شود که سرطان پستان در دوران بارداری، در اولین سال پس از زایمان یا هر زمان در دوران شیردهی تشخیص داده شود. هدف این مطالعه مرور مطالعات تشخیص سرطان سینه در بارداری است.

پرداخته است. کلیدها: Uptodate و Pubmed , googlescholar روش: این مطالعه مروری به بررسی مطالب موجود در مقالات مروری، مداخله ای، توصیفی و گزارش موردی از سال ۲۰۱۵ تاکنون در مطالعه وارد شد. برای جستجوی مطلب از کلمات کلیدی، سرطان سینه بارداری در عنوان مقالات استفاده شد. پس از حذف مطالعات تکراری و غیرمرتبط در نهایت تعداد ۶ رفرنس مورد مطالعه قرار گرفت.

یافته ها: تشخیص سریع سرطان برست در بارداری از اهمیت بالایی برخوردار است. اخذ شرح حال، معاینات روتین و توجه به نتایج سیتولوژی باید با دقت انجام شود. علائم سرطان سینه در زنان باردار یا پس از زایمان معمولاً مشابه زنان غیرباردار بصورت توده یا ضخیم شدن سینه است. ممکن است نوزاد از شیرخوردن از پستانی که دارای سرطان مخفی است خودداری کند. این علامت "رد شیر" نامیده شده است. در زنان باردار با توده سینه شک جدی نسبت به سرطان وجود دارد. توده پستانی که بیش از دو هفته باقی بماند باید بررسی شود.

ماموگرافی - گزارش شده که تغییرات فیزیولوژیکی پستان در بارداری باعث کاهش حساسیت ماموگرافی می شود. بنابراین باید به عنوان یک روش تشخیص کمی مورد استفاده قرار گیرد.

سونوگرافی - اولتراسوند روش تصویربرداری انتخابی در ارزیابی ناهنجاری های پستان در دوران بارداری و شیردهی است. ویژگی های خوش خیم یا بدخیم را تشخیص می دهد و می تواند برای هدایت بیوپسی تشخیصی استفاده شود. توده جامد موضعی در اکثر موارد سرطان پستان بارداری مشاهده می شود.

بطور سیستماتیک برای تشخیص توده های پستان در زنان (MRI) برست - تصویربرداری رزونانس مغناطیسی MRI بطور کلی پذیرفته MRI باردار یا شیرده مورد مطالعه قرار نگرفته و ممکن است تفسیر آن چالش برانگیز باشد. استفاده از MRI نمی شود، اما بعد از بارداری قابل انجام است.

تقویت شده با گادولینیم برای تشخیص سرطان سینه مهاجم، حساس تر از ماموگرافی است. اما بدلیل آسیب MRI اگرچه احتمالی جنین از مصرف گادولینیم اجتناب شود و در صورت نیاز به پس از زایمان موکول شود.

بیوپسی - برای تشخیص قطعی در توده پستانی مشکوک از نظر بالینی بیوپسی لازم است، صرف نظر از باردار بودن یا نبودن زن و با وجود یافته های منفی ماموگرافی یا سونوگرافی بیوپسی های مرکزی. بیوپسی برشی یا اکسیزیونی را می توان در طول بارداری انجام داد. بیوپسی هسته ای با سوزن روش ارچ است.

غدد لنفاوی - نواحی در معرض خطر (مثل گره های زیر بغل) و/یا از نظر بالینی مشکوک به گرفتاری غدد لنفاوی باید با سونوگرافی و بیوپسی آسپیراسیون با سوزن ظریف برای تایید سیتولوژیک ارزیابی شوند.

مرحله بندی سیستمیک - ارزیابی کامل رادیوگرافیک برای مرحله بندی لازم است. اما در زنان بدون علامت که سرطان در مراحل اولیه است و غدد لنفاوی منفی بالینی دارند، ممکن است نیازی به ارزیابی ریه، کبد، استخوان یا مغز نباشد.



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ارزیابی قفسه سینه - رادیوگرافی قفسه سینه برای ارزیابی متاستازهای ریه با محافظت از شکم انجام شود.

تا حد امکان باید به دلیل دوز جمعی تشعشع در هنگام بدست آوردن برش های متعدد، از انجام سی تی اسکن در دوران قفسه سینه معمولاً ترجیح داده می شود. MRI بارداری اجتناب شود.

ارزیابی کبد و مغز - سونوگرافی شکم برای ارزیابی متاستازهای کبدی یک روش بی خطر در زنان باردار است. سی تی در سه ماهه اول MRI اسکن شکم یا لگن به دلیل قرار گرفتن جنین در معرض تابش انجام نمی شود. در صورت امکان از حساس ترین روش برای اسکن مغز است. اطلاعات در مورد MRI اجتناب شود. در صورت مشکوک شدن به متاستاز مغز، توموگرافی انتشار پوزیترون در بارداری محدود است.

اسکلتی (بدون MRI بررسی استخوان - اسکن استخوان رادیونوکلئید در دوران بارداری بی خطر است. ممکن است کنتراست) به عنوان یک جایگزین، در نظر گرفته شود. از آنجایی که متاستازهای سینه در مغز قرمز رسوب می کنند، تصویربرداری از ستون فقرات، لگن، دنده ها و جناغ سینه مناسب است. رادیوگرافی های اسکلتی ساده ایمنی نامشخص دارد. حتی سطوح پایین تابش یونیزان خطر ابتلا به سرطان خون در کودکی دارد.

آلکالین فسفاتاز در دوران بارداری افزایش می یابد و نمی توان از آن به عنوان شاخص متاستاز استخوان استفاده کرد.

نتیجه گیری: سرطان باید در زنان باردار با توده سینه مد نظر باشد. در موارد مشکوک سونوگرافی و ماموگرافی سینه قابل انجام است. برای تشخیص قطعی در صورت وجود توده مشکوک کلینیکی بیوپسی لازم است. برای مراحل پیشرفته موضعی و/یا دارای علائم مشکوک ارزیابی کامل رادیوگرافیک برای مرحله بندی انجام می شود.

**Keywords:** سرطان سینه حاملگی، زنان، تشخیص



P-1178

## Gene expression and cytotoxicity properties of Golestan's native truffle (*Tuber aestivum*) on MCF-7 cell lines

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### Abstract

Background: Truffles are the fruiting bodies of ascomycetes that grow naturally in many countries all over the world. They are known as ancient organic sources with nutritional and therapeutic properties. They are rich in biochemical compounds such as terpenoids, polysaccharides, phenolics, and phytosterols which have anticancer, antioxidant, hepatoprotective, antibacterial, immunomodulatory, and anti-inflammatory.

activities (Patel S, 2012). Therefore, the aim of this study was to test and determine anti-cancer properties of black truffle (*Tuber aestivum*) collected from Golestan province, Iran, yet unexplored in terms of its cytotoxic effects on breast cancer cells.

Methods: MTT assay was utilized to evaluate cytotoxicity. To deduce the molecular mechanism of Truffle, apoptosis-related genes including Bcl-2 and Bax were evaluated by real-time RT-PCR. The expression changes of the pro-apoptotic Bax gene and the anti-apoptotic Bcl-2 gene and the Bax/Bcl 2 ratio were studied through the  $2\Delta\Delta CT$  method.

Result: *T. aestivum* extracts prevented the development of cancer cell lines in a dosage and time dependent manner. Furthermore, when compared to control cell lines (HDF), the truffle extract was the most effective inhibitor against breast cancer cells line (MCF7). To give an illustration, following truffle treatment, a significant reduction in cell viability was seen in cancer cells, although cell vitality in normal control cells was lower. Analysis showed the lowest effective IC50 values of 4356.0 and 6936.8, for cancer and normal cell lines respectively. The truffle action on apoptotic gene expression in normal and cancer cells revealed that this extract significantly increased the expression of pro-apoptotic Bax gene and decreased the expression of inhibitor of apoptosis, Bcl2 gene, in cancer cells compared to normal cells.

**Keywords:** Breast Cancer·Truffle (*Tuber aestivum*)·Gene Expression·Cytotoxicity



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P-1081

## The effect of colposcopy on cervical lesions

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### Abstract

**Introduction:** Cervical cancer is the third most common cancer in women and ranked sixth in mortality in cancer worldwide. In Iran, cervical cancer is the fifth most common cancer in women and in this study we investigate the effect of colposcopy in the diagnosis of cervical lesions.

**Research methods:** This review study was conducted at the reputable medical databases of Scopus, PubMed, Google Scholar, Web of science and searched for the keywords colposcopy, cervical lesions, pap smear. Then 16 articles that met the inclusion criteria were evaluated.

**Results:** Human papilloma virus (HPV) is a known cause of cervical cancer. This cancer generally occurs at the age of 30 to 55 years. HPV virus induces apoptosis (programmed cell death) and production of P53 and retinoblastoma cell line inhibitors Cell provides. type 16 and type 18 HPV viruses are the most common type of cervical cancer that can be colposcopically diagnosed with cervical cells, uterine arteries, ulcers, and cervical lesions, followed by treatment. therefore, Colposcopy is both a diagnostic and a therapeutic procedure.

**Conclusion:** Colposcopy can detect malignant cells and cancers with a high accuracy of 99% and prevent them from growing. Colposcopy has a higher diagnostic value in the early diagnosis of cervical cancer than other tests (Pap smear, ivp ...). If colposcopy is available as a first stage and is routinely used to screen for cervical cancer, more patients will be identified and a better survival rate will be achieved.

**Keywords:** Colposcopy, Cervical, Pap smear, malignant cells



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P-1067

## Natural antioxidants: A protective barrier against cancer

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### Abstract

مقدمه: مطالعات اخیر اپیدمیولوژیکی و تجربی بر روی حیوانات قویاً اظهار می‌کنند که بین افزایش مصرف میوه‌ها، سبزیجات، ادویه‌جات و ترشی‌جات و کاهش خطر ابتلاء به سرطان، رابطه‌ی غیرقابل انکاری وجود دارد. وجه اشتراک این غذاها، مولکول‌هایی با اثرات پیشگیرانه یا محافظتی در برابر سرطان‌زایی ناشی از تابش یا ترکیبات مختلف درون‌زا (فیزیولوژیکی) و اکزوژنیک (محیطی یا بیماری‌زا) سرطان‌زا می‌باشند.

روش کار: در این مطالعه، از مقالاتی که از سال ۲۰۱۰ به بعد، خواص آنتی‌اکسیدانی مواد غذایی تازه را بررسی کرده بودند، همراه با مقالات مروری روش‌های تأثیر استرس اکسیداتیو و اثر آن بر کاهش سرطان‌زایی، استفاده شد.

نتایج: نتایج مقالات قبلی نشان داده‌اند که بین دو جفت مولفه‌ی سرطان و استرس اکسیداتیو و آنتی‌اکسیدان‌ها و استرس اکسیداتیو، روابط مشخصی وجود دارد. در این مطالعه، ارتباط آنتی‌اکسیدان‌های طبیعی و سرطان مورد بررسی قرار گرفت که نهایتاً این جمع‌بندی حاصل شد که مصرف آنتی‌اکسیدان‌ها می‌تواند به شکل مؤثری از شکل‌گیری سرطان کاسته و حتی در مواردی، به درمان آن‌ها کمک کند.

نتیجه‌گیری: مصرف آنتی‌اکسیدان‌ها به عنوان یک راه حل مؤثر بر کاهش شانس ابتلاء به سرطان در طولانی‌مدت بوده و می‌توان با اضافه‌کردن آن به رژیم غذایی، از بسیاری از بیماری‌های دیگر هم جلوگیری کرد.

**Keywords:** آنتی‌اکسیدان، استرس اکسیداتیو، سرطان، پیش‌گیری، سبک زندگی



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P-1040

## Relationship between dietary phytochemical index and colorectal cancer in Mazandaran: a cross-sectional study

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### **Abstract**

**Introduction:** The consumption of isoflavones in the diet has been positively associated with the risk of colorectal cancer (CRC) in some previous studies. In addition, gastrointestinal cancers are widespread in Mazandaran province and so far no study has been conducted to investigate the relationship between phytochemicals and colorectal cancer. Therefore, this study examines the relationship between the dietary phytochemical index (DPI) and CRC.

**Methods:** This case-control study was conducted on 350 CRC patients over 25 years of age who were selected from private clinics in Mazandaran. All patients were diagnosed by an oncologist within the last 6 months. Using the cluster sampling method, 350 healthy people with age and socio-economic status were randomly selected from healthy people who had no relationship with the patients and had no family history. Data on food intakes were collected using a validated food frequency questionnaire. DPI was calculated based on dietary energy derived from phytochemical-rich foods (kcal) divided by the total daily energy intake (kcal) of each participant.

**Results:** Based on the regression models, in the raw model, participants in the highest quartile of DPI compared to those in the lowest quartile had a 63% lower chance of CRC. This inverse association was strengthened in subjects in the overweight and obese groups, after adjusting for potential confounders.

**Conclusion:** In conclusion, a protective relationship between DPI and CRC was observed in this case-control study. Therefore, a high intake of foods rich in phytochemicals such as fruits, vegetables, and whole grains may help reduce the risk of CRC in individuals.

**Keywords:** Colorectal cancer, phytochemicals, nutrition, lifestyle.



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P-1132

The Effect of Self-Care and Sexual Rehabilitation on Improving Sexual Dysfunctions in Women  
with Gynecological Cancers – A Review Article

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**Abstract**

**Introduction:** Cancer induces changes across all dimensions and aspects of the lives of those affected. Rehabilitation is an approach that enhances patients' abilities and capacities, enabling them to achieve optimal functioning in various life domains, including physical, sexual, functional, and psychological aspects. This empowerment fosters self-care, promotes health, facilitates a better understanding of the disease, aids in managing treatment side effects, controls symptoms, and ultimately improves quality of life.

**Methods:** This review study aimed to explore the impact of self-care and sexual rehabilitation on improving sexual dysfunction in women with cancer. A comprehensive search yielded 35 articles published between 2010 and 2023, utilizing keywords such as women's cancers, sexual rehabilitation, self-care, and sexual dysfunction rehabilitation across PubMed, Google Scholar, and SID databases.

**Results:** Empowering patients in self-care enhances their health, deepens their understanding of the disease, aids in managing treatment side effects, controls symptoms, and improves overall quality of life. Examples of sexual rehabilitation interventions include psychotherapy, the use of vibrators, vaginal dilators, and counseling approaches such as PLISSIT and BETTER.

**Conclusion:** Given the significant role of midwives as caregivers and consultants in women's health, implementing self-care and sexual rehabilitation strategies can be highly beneficial in enhancing the quality of life for those affected by cancer.

**Keywords:** Women's cancers, self-care, sexual rehabilitation, sexual dysfunction



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P-1133

## The relationship between mental health and breast cancer preventive behaviors in Iranian women

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### Abstract

**Background:** Breast cancer is the second cause of cancer-related death (1), and in Iran, the cause of death is 16% of all cancers (2). Iranian women get breast cancer a decade earlier than women in developed countries (2). One of the ways to reduce the risk of mortality from breast cancer is early detection (3). Screening is one of the best approaches for early detection of breast cancer, and the three common screening methods for detecting this disease are breast self-examination, clinical examination by a physician, and mammography (5). Considering the importance of breast cancer preventive behaviors and the limited number of studies in this field in Iran, this study aimed to determine the relationship between mental health and breast cancer preventive behaviors in Iranian women.

**Method and material:** This cross-sectional study was conducted on 1025 women who were referred to health centers in the cities of Amol, Babol, and Sari from Mazandaran province in 2017. Sampling was done as available and according to the inclusion criteria. The inclusion criteria were consent to participate in the study, age higher than 18 years, and no history of breast cancer. Women's mental health was examined with the 12-question "Goldberg mental health questionnaire" (GHQ General Health Questionnaire). This questionnaire is designed with a four-point Likert scale (0,1,2,3). A lower score indicates better mental health (8). A score of 14.5 and above indicates a disorder in mental health (9). Also, the women completed the demographic information questionnaire, and breast screening information (breast self-examination, clinical breast examination by a physician, and mammography). A significance level of less than 0.50 was considered.

**Result:** The results of the study showed that the average age of the women in the study was  $33.57 \pm 9.27$  years. Most of the women (87.4%) were married, (65.1%) were housewives and lived in the city (67.3%). Also, approximately one-third and one-second of them had a university education (38%) and two children (48.7%) respectively. The results of the study showed that according to the mental health questionnaire, 28.5% of the women studied had a mental health disorder. In terms of the relationship between mental health and breast cancer preventive behaviors, the results of the study showed that there is a statistically significant relationship between breast self-examination by women ( $P=0.001$ ), examination by a physician ( $P=0.007$ ), and mammography



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( $P=0.027$ ) with mental health. It was found that women with better mental health were more likely to perform breast cancer preventive behaviors.

Discussion: This study was conducted with the aim of relating mental health with breast cancer preventive behaviors in Iranian women. The results showed that 52% and 21% of the study women performed breast self-examination and clinical examination at least once a year. Also, 19/7% of them had a breast mammogram once.

Conclusion: Increasing women's awareness and performing free mammography can be effective in increasing this preventive behavior.

**Keywords:** mental health, breast cancer preventive behaviors, breast cancer, Iranian women



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مرکز تحقیقات بیماری های غیرواگیر کودکان، دانشگاه علوم پزشکی بابل - دانشگاه علوم پزشکی مازندران - دانشگاه علوم پزشکی مازندران - دانشگاه علوم پزشکی مازندران

### Abstract

سرطان پستان دومین علت مرگ ناشی از سرطان ها را شامل می شود (۱). در ایران ۱۶ درصد از کل سرطان ها را به خود اختصاص داده است (۲) و زنان ایرانی یک دهه زودتر از زنان کشورهای توسعه یافته به سرطان پستان مبتلا می شوند (۲). یکی از راههای مقابله و کاهش خطر مرگ و میر ناشی از سرطان پستان، تشخیص زودرس است (۳). اگر سرطان پستان زود تشخیص داده شود بیش از ۹۰ درصد مبتلایان درمان می شوند (۴). در ایران علل عمده مرگ و میر و سایر پیامدهای ناگوار این بیماری ناشی از مراجعه دیر هنگام است (۴). از بهترین راههای تشخیص زودرس سرطان پستان، غربالگری می باشد، و سه روش غربالگری معمول برای شناسایی این بیماری، خودآزمایی پستان، معاینه کلینیکی توسط پزشک و انجام ماموگرافی است (۵). سرطان پستان یکی از اولویت های بهداشتی در ایران بوده و شناسایی میزان آگاهی زنان در رابطه با رفتار غربالگری پستان در طراحی یک برنامه پیشگیری از سرطان پستان مؤثر خواهد بود. بنابراین این مطالعه با هدف، تعیین وضعیت رفتارهای پیشگیرانه از سرطان پستان در زنان مراجعه کننده به مراکز بهداشتی-درمانی شهرهای مرکزی استان مازندران (آمل، بابل و ساری) انجام شد.

### روش کار

این مطالعه به صورت مقطعی روی ۱۱۷۵ زن مراجعه کننده به مراکز بهداشتی درمانی در سه شهر مرکزی استان مازندران، آمل، بابل و ساری در سال ۱۳۹۷ انجام شد. نمونه گیری به صورت در دسترس و بر اساس معیار ورود صورت گرفت. معیار ورود به مطالعه شامل تمایل به شرکت در مطالعه، سواد خواندن و نوشتن سن بالای ۱۸ سال و عدم سابقه ابتلا به سرطان پستان بود. زنان مطالعه، اطلاعات دموگرافیک، اطلاعات مشکلات پستانی، اطلاعات غربالگری پستان (خودآزمایی پستان، معاینه کلینیکی پستان توسط پزشک، ماموگرافی) را تکمیل کردند. سطح معنی داری کمتر از ۵۰/۰ در نظر گرفته شد.

### نتایج

نتایج مطالعه نشان داد که میانگین سنی زنان مطالعه  $33/26 \pm 9/19$  سال و ۸۱/۴ درصد متاهل و ۶۵/۷ درصد در شهر زندگی می کردند هم چنین تقریباً یک سوم آنان دارای تحصیلات دانشگاهی (۳۸٪) و شاغل (۲۴٪) بودند. اکثر زنان (۶۲٪) درآمد خود را در حد متوسط ذکر کردند. تقریباً نیمی (۴۸/۲٪) از زنان مطالعه دو فرزند داشتند. نتایج مطالعه نشان داد که ۱۸ درصد از زنان مطالعه مشکلات پستانی را تجربه کردند و شایعترین مشکل پستانی ذکر شده، بترتیب کیست های پستانی (۴۵/۶٪)، درد پستان (۲۶/۲٪) و توده های خوش خیم پستانی (۱۳/۸٪) بود. در ارتباط با رفتارهای غربالگری پستان، نتایج مطالعه نشان داد که تقریباً نیمی (۵۲٪) از زنان مطالعه سالانه حداقل یکبار خودآزمایی پستان و یک پنجم (۲۰/۹٪) آنان نیز سالانه یکبار معاینه کلینیکی داشتند. هم چنین ۱۹/۷٪ از زنان مطالعه حداقل یکبار ماموگرافی پستان را انجام داده بودند (جدول ۱).

### بحث و نتیجه گیری

این مطالعه با هدف تعیین رفتارهای پیشگیرانه سرطان پستان در زنان مازندران انجام شد. نتایج مطالعه نشان داد که بترتیب ۵۲ و ۲۱ درصد از زنان مطالعه سالانه، حداقل یکبار خودآزمایی پستان و معاینه کلینیکی را انجام داده بودند. هم چنین ۱۹/۷٪ از آنان نیز یکبار ماموگرافی پستان داشتند. میزان خودآزمایی پستان زنان در شهرهای مختلف ایران بین ۴ تا ۳۷ درصد گزارش شده است (۶، ۷). که از میزان مطالعه ما پایین تر است. علت این تفاوت می تواند از چند جنبه قابل ارزیابی باشد.



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در مطالعه حاضر تقریباً یک سوم از زنان، دارای تحصیلات دانشگاهی و شاغل بودند. محققین گزارش کردند بین افزایش در مطالعه ای در زنان Lamyian M میزان تحصیلات و سطح درآمد با انجام رفتارهای پیشگیرانه ارتباط وجود دارد. فرانسوی نشان داد که ۹۲ درصد از زنان بالای ۵۰ سال غربالگری ماموگرافی را انجام دادند (۸). اما در مطالعه حاضر غربالگری ماموگرافی در حدود ۲۰ درصد بود. انجام ماموگرافی بصورت انتخابی و رایگان می تواند در افزایش این رفتار پیشگیرانه موثر باشد. با توجه به نتایج مطالعه، انجام رفتارهای پیشگیرانه سرطان پستان بویژه معاینه کلینیکی پستان توسط پزشک و ماموگرافی پایین بوده است که با افزایش آگاهی و تسهیلاتی چون ویزیت و ماموگرافی بدون هزینه این میزان را می توان افزایش داد.

**Keywords:** سرطان پستان، غربالگری پستان، ماموگرافی، رفتارهای پیشگیرانه





P-1063

## Epidemiology of pediatric cancer: A 12-year study at Shafi'zadeh Amirkola Children's Hospital (۲۰۱۹-۲۰۰۸)

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### Abstract

Introduction: Cancer is the second leading cause of death in children under 14 years of age, after accidents (1, 2). The World Health Organization (WHO) estimates that the incidence rate of childhood cancer is about 100 per million children (3). The incidence rate of childhood cancer in Iran was 48-112 and 51-144 per million in girls and boys in different geographical areas, respectively (4). In general, lymphohematopoietic malignancies such as lymphoma and lymphoblastic leukemia account for 40%, central nervous system tumors account for about 30%, and embryonal malignancies and sarcomas account for about 10% of childhood cancers. Pediatric cancers differ significantly from adult malignancies in terms of cancer type, distribution, and prognosis (5). There is no information about cancer in children in the north of Iran, therefore the aim of this study was to investigate the epidemiology of cancer in children referred to Shafi'zadeh Amirkola Children's Hospital between 2009 and 2020. Shafi'zadeh Amirkola Children's Hospital is an active center in the north of Iran.

Materials and Methods: This cross-sectional study was conducted on all children with cancer referred to Shafi'zadeh Amirkola Children's Hospital from 2009 to 2020. Initially, all referred children were visited by the pediatric hematology and oncology specialists of this educational-therapeutic center. The process of clinical diagnosis (clinical examinations) and paraclinical (special tests, collection of cerebrospinal fluid, biopsy of a suspicious organ, ultrasound, CT scan, etc.) was performed and after final confirmation of cancer, 320 children were enrolled in the study. Patient information including demographic information (age at first visit and at disease diagnosis, sex, date of first visit, and place of residence) and type of cancer, were obtained from patients' medical records and entered into the questionnaire. The data were analyzed using SPSS 24, and a P value of less than 0.05 was considered significant.

Results: Of the 320 patients with various types of malignancy, 200 (62.5%) were male and 120 (37.5%) were female. The age range of the children in the study at the time of diagnosis was from less than one year to 18 years, and their mean age was  $4.81 \pm 4.538$  years. A total of 21 types of cancer were diagnosed in these children, of which acute lymphoid leukemia (ALL), acute myeloid leukemia (AML), and neuroblastoma were the most common in 173 (54.1%), 23 (7.2%), and 17 patients (5.3%), respectively. During the follow-up period of these patients, 64 (20%) patients had died, including 20 (31.25%) patients with ALL. There was no significant relationship between



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patient sex and type of disease (P value=0.731). The average number of newly admitted patients with cancer was  $26.67 \pm 8.283$  patients per year (Chart 1). An investigation of their places of residence revealed that 60.8% of those referred were from outside the cities of Babol and Amirkola (Table 2).

Conclusions: The results of this study showed that the most common type of cancer in children referred to this center was leukemia of the ALL type (54.1%) and that childhood cancer was more common in males than in females.

**Keywords:** Epidemiology, Child, Neoplasms, Shafizadeh Amirkola Children' Hospital



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## Nutritional support in cancer patients: A review study

Mojgan Baraty kahrizsangi - Reza Masoudi

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### Abstract

**Background:** The industrialization of societies, changing in lifestyle, and unhealthy diets have caused an increasing number of cancer patients. Cancer treatments such as radiation therapy and chemotherapy, as well as the disease process, bring many adverse effects for the patient and family. In this regards, diet plays an effective role in preventing disease and managing complications from treatment, and various articles and guidelines are published every year about the importance of nutrition and the scientific type of diet. The present study was conducted with the aim of reviewing studies related to nutritional support in cancer patients .

**Methodology:** This review study by searching the Persian keywords of nutrition, diet, guidelines, cancer, and complications management and their English equivalents in databases such as: SID, Google Scholar, Magiran, Pubmed, and also by searching phrases. "Nutritional instructions after chemotherapy" and "Nutritional care after cancer treatment: Guidelines" have been done on cancer sites such as include: Asco, esmo, and ACS. A total of 56 articles were found from 2015 to 2022 years, out of which pre-print and full-text articles were removed and finally 41 articles were evaluated and reviewed.

**Findings:** The findings of this study are divided into several parts, including: assessment of the nutritional status of patients and timely diagnosis of malnutrition, interventions and guidelines for timely nutrition in people at risk, nutritional support and education during treatments. Anti-cancer, the role of nutrition in the prevention of disease and nutritional support at the end of life is divided. The results of the studies indicated that the assessment of patients in terms of nutritional status and the initiation of nutritional support should be done in the early days of diagnosis and treatment and as soon as possible. Failure to pay attention to this issue can reduce the response to treatment and endanger the quality of life of patients by causing malnutrition. During the treatment, patients suffer from complications such as diarrhea, constipation, mouth sores and loss of appetite due to the side effects of chemotherapy and radiation therapy, which require proper and reliable training to manage these symptoms as best as possible. If, despite nutritional recommendations, patients still suffer from malnutrition, other methods are used to compensate for the deficiencies and provide energy-protein for these people, such as using complementary nutrition or even alternative methods of oral nutrition, such as intravenous nutrition or artificial. Artificial nutrition is mostly used in the final stages of life and in palliative care. Of course, it should be noted that the use of artificial nutrition in the final stages of life is subject to compliance with ethical issues.

**Conclusion:** safe and accurate diet and proper and basic nutrition in cancer patients are of particular importance due to their weakness and widespread physical discomfort. Since recognizing the



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problem is the first step to managing it; It is necessary to include a written program to assess the nutritional status of cancer patients in the agenda of referrals to competent authorities in order to witness the increasing reduction of malnutrition in susceptible cancer patients.

**Keywords:** Support·Diet·Cancer·Guidelines·Review



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P-1107

## Knowledge, attitudes and practices related to breast cancer screening among women's health care providers: a cross-sectional study

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### Abstract

#### Introduction

Breast cancer is the most common cancer among women worldwide. Breast cancer is now the most commonly diagnosed cancer in the world. For effective screening and early diagnosis, adequate knowledge and awareness are of utmost importance.

#### Methods

This cross-sectional study was conducted on health care providers in Khuzestan province. The study population was stratified according to their professions into three groups: physicians, nurses, and allied healthcare workers. Also Samples were selected by stratified random sampling. we used questionnaire for survey knowledge, attitudes, and practices related to breast cancer screening.

#### Results

Of 270 participants, 43.7%, 25.9 % And 30.4% were healthcare workers, physicians and nurses, Respectively. The mean age (SD) for the participants in this study was 35.8. overall, physicians had a better level of knowledge about breast cancer screening. But A majority of participants (52 %) had a low level of knowledge related to breast cancer screening. our study showed that 145 (54.8%) participants reported practicing breast self-examination, 80 (29.6%) had undergone clinical breast examination, and 93 (34.4%) had ever undergone mammography.

#### Conclusion

Overall, the results of this study showed that knowledge, attitudes, and practices of the staff related to breast cancer screening is lower than expected. Although, the screening tools and resources are available however there is lack of active educational programs and campaigns directed at healthcare workers.

**Keywords:** Breast cancer, practices, attitude, screening, Knowledge



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P-1134

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### Abstract

مقدمه: سواد سلامتی میزان ظرفیت هر فرد برای کسب، تفسیر و درک اطلاعات اولیه و خدمات سلامتی است که برای تصمیم‌گیری مناسب لازم می‌باشد. هدف از انجام این مطالعه تعیین میزان سواد سلامت دانشجویان پیراپزشکی در رابطه با سرطان، جهت مداخلات بعدی توسط سیاست‌گذاران نظام سلامت است.

مواد و روش‌ها: در این مطالعه توصیفی تحلیلی، سواد سلامت ۲۰۶ نفر از دانشجویان با استفاده از ابزار محقق ساخته اندازه‌گیری گردید. سواد سلامت در مورد عوامل خطر سرطان در ۷ حیطه نگرش به سلامت، درک اطلاعات، حمایت اجتماعی، شرایط اقتصادی اجتماعی، دسترسی به سرویس سلامت، ارتباط با متخصص سلامت و به کار بستن اطلاعات سلامتی اندازه‌گیری شد.

یافته‌ها: میانگین سطح کلی سواد سلامت در شناخت عوامل خطر سرطان ۳/۷ و میانگین سطح سواد سلامت در شناخت عوامل خطر سرطان ۳/۵۸ گزارش شد. درحوزه سرطان، سطح سواد در شناخت عوامل خطر سرطان در زنان و مردان یکسان بود و با افزایش سطح تحصیلات نیز فراوانی سواد سلامت کافی بطور معنی داری افزایش نشان می‌داد ( $P=0/008$ ).

نتیجه‌گیری: در مجموع ۴۵/۲٪ از افراد در مورد شناخت عوامل خطر سرطان سواد سلامت ناکافی داشتند. کمترین سطح سواد مربوطه به بکار بستن اطلاعات سلامت بود. با توجه به اهمیت موضوع سواد سلامت و ارتباط آن با پیامدهای مرتبط با سلامت، به نظر می‌رسد در برنامه‌ریزی‌های آینده توسط سیاست‌گذاران سلامت توجه هرچه بیشتر به ارتقای سواد سلامت به خصوص در حوزه بکار بستن اطلاعات سلامت مورد نیاز می‌باشد.

**Keywords:** سرطان، سواد سلامت، عوامل خطر، دانشجویان



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P-1166

## Polymorphism of LRP4 Gene (rs9667108) among Post Menopause Women with Osteoporosis

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### Abstract

**Background:** Many studies have been done to identify the factors that influence the development and pro-gression of osteoporosis. One genetic factor is polymorphisms of LRP4 gene. Regarding the lack of comprehensive study on polymorphisms of LRP4 gene in the north of Iran, mainly Mazandaran Province, we decided to investigate the polymorphism of this gene in postmenopausal women with osteoporosis.

**Methods:** This case-control study has been conducted at GhaemShahr Valiasr Hospital on 100 female patients with osteoporosis (average age of 58.1) and 90 healthy females without osteoporosis (average age of 55.2). After sampling and extraction of genomic DNA via of the salt deposition method, the genotype and SNP (rs9667108) polymorphism of LRP4 gene were evaluated with the PCR-RFLP method. Restriction enzymes cut the PCR products. In order to identify patients, their bone mineral density was tested by the DEXA method. The results of digestion (digestion enzyme) were analyzed by MedCalc, SPSS software, Hardy-Weinberg equilibrium, and Chi2.

**Results:** The statistical analysis has shown the significant relationship between SNP (rs9667108) polymorphism and the risk of osteoporosis disease in patients and control groups ( $P < 0.05$ ). In SNP (rs9667108), the GC genotype, compared to GG, increased the risk of disease significantly (1.556 time). Similarly, CC genotype, compared to GG genotype, increased the risk of this disease by 2.091 time.

**Conclusion:** The existence of mutation in the LRP4 gene could increase susceptibility to osteoporosis disease. Moreover, determining this patient's genotype in SNP (rs9667108) can be used to identify individuals who are in danger of osteoporosis.

**Keywords:** Osteoporosis, PCR, Polymorphism genetics, Single nucleotide polymorphisms (SNPs)



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P-1106

## Care approaches for cancer patients during the covid-19 pandemic: a review of strategies, experiences and solutions

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### Abstract

Background: Corona epidemic is considered the newest health threatening factor all over the world. Although all people in the community were at risk of contracting the disease, the chance of cancer patients to contract the severe type of corona was reported to be 3.5 times that of other patients. Also, cancer was considered as the main risk factor for adverse outcomes and death in the Covid-19 pandemic. Therefore, effective care is important in order to prevent the cancer patients of being infected and advance the treatment process. In this study, we have reviewed the methods of caring for cancer patients during this pandemic. methods: In the current review, the keywords care, nursing care, covid 19, cancer, malignancy and oncology units were searched in Google Scholar, SID, Magiran and PubMed websites in the time period of 2019 to 2023.

Results: A total of 45 relevant articles were found, of which 8 articles were excluded from the study due to lack of access to full text or non-English and non-Persian languages. Finally, 37 articles were examined. In an epidemic of an infectious disease, the most important points in providing care are following the aseptic principles, social distancing and quick diagnosis of the disease. As a result, continuous hand washing, use of personal protective equipment (PPE), maintaining a distance of at least 1 meter from others, isolating and staying at home, checking the symptoms of corona before visiting the hospital, reducing the waiting time of people in medical centers and the number of visits to the hospital through reducing chemotherapy sessions and replacing drugs are among important cares. This pandemic has disrupted the visits and follow-ups of cancer patients and delayed the detection of new cancer. So, to prevent the negative consequences of this issue, technology can be used and the debates of Telemedicine and Telehealth are raised. Telephone triage is one of the most effective methods to check the level of general health, metastasis and infection with covid-19. Self-care applications and holding online meetings can be used for counseling and communicating with the medical staff in order to reduce the effects of isolation (feeling of loneliness, depression, etc.), control the side effects of treatment, increase awareness and improve the patient's treatment process. A large number of cancer patients are elderly people who need more careful care. Elderly patients should be separated from others to reduce the risk of infection, their nutritional status and treatment should be regularly checked online, and they should have telephone monitoring and home care. Also, their radiotherapy periods should be shorter. In these patients, palliative care and end-of-life care are more important.



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Conclusion: Nurses and other members of medical team are expected to raise the care of cancer patients to a higher level according to the guidelines and experiences accumulated during this pandemic and protect this sensitive group from this dangerous disease. What is important is that the care of these patients continues as before and the changes caused by the crisis in their quantity and quality are minimized.

**Keywords:** care, covid 19, cancer



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P-1027

## Effects of Chicory and Fumitory on Hot Flashes of Breast Cancer Survivors Compared to Venlafaxine: A Randomized Clinical Trial

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### Abstract

#### Introduction

Hot flashes as an inevitable bothersome side effect of cancer therapy is an unsolved health problem in breast cancer survivors that can clearly affect quality of life of patients. The aim of this study was to compare the efficacy of distilled of chicory and fumitory as a conventional herbal remedy in Traditional Persian Medicine with venlafaxine on improving of hot flashes in breast cancer patients.

#### Materials and Methods

In this randomized clinical trial, participants by block randomization allocated in two groups: those who consumed distillate of chicory and fumitory (DCF), and those who took venlafaxine. The patients in two groups recorded the number and severity of hot flashes in daily diary one week before starting the intervention (baseline week). After that, they started to drink DCF (150 cc twice daily) or venlafaxine (37.5 mg in first week and 75 mg in the next three weeks) for four weeks, and accordingly completed the daily diary.

Results: 24 patients in DCF group and 17 patients in venlafaxine group completed the study. After four weeks, frequency of hot flashes in DCF group was 30.70% (p-value<0.001), and 40.88% in venlafaxine group (p-value<0.001). Also, DCF could decrease mean score of hot flashes to 41.34% (p-value<0.001), and venlafaxine could decrease to 56.93% (p-value<0.001). There were no significant differences between two groups during the first three weeks of the intervention. However, in the last week of the study, venlafaxine was more effective than DCF. As well, fewer side effects were observed in participants who received DCF. This study aimed to compare the efficacy of chicory and fumitory, a conventional herbal remedy in Traditional Persian Medicine, with venlafaxine in improving hot flashes in breast cancer patients. The results showed that DCF could improve hot flashes as well as venlafaxine. However, venlafaxine was significantly more effective in managing hot flashes in the last week of the intervention. It should be noted that although venlafaxine was more effective, it was difficult for patients to tolerate it, and a few participants withdrew from the study due to various side effects, especially in the first week of the intervention.



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Conclusion: DCF as well as venlafaxine could improve hot flashes score and frequency in women with breast cancer who were undergoing hormonal therapy. However, in the last week of intervention, venlafaxine was more efficient in improve hot flashes score and frequency.

**Keywords:** Traditional Medicine, Cancer, Nutrition, Hot Flashes



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P-1111

## The relationship between lifestyle and prevalence of Breast cancer

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### Abstract

**Background:** Breast cancer is one of the most common cancers among women. An increase in free radicals in the body can cause an increase in oxidative stress, which is not a favorable situation. While free radicals are harmful by their very nature, they are an inevitable part of life. The body produces free radicals in response to damage from several lifestyle factors, including: air pollution, cigarette smoke, alcohol consumption, toxins, high blood sugar levels, high consumption of unsaturated fatty acids, radiation (including excessive sun exposure). In some cases, many diseases and cancers can be prevented by creating a healthy lifestyle.

**Methods:** The current review by searching in reliable books and useful databases such as Scopus, Elsevier, PubMed, Science Direct, Google Scholar, Mag Iran, Iran Dog, Iran Medex in the years 2010 to 2023 with keywords such as lifestyle, stress, cancer, breast cancer, environmental pollutants, antioxidants and physical exercise, were done.

**Results:** Aerobic exercises reduce the risk of breast cancer by changing the level of estrogen hormone secretion and body metabolism. People with cancer can do at least 150 minutes of moderate exercise, and they can also do 70 minutes of high-intensity exercise. Sports such as yoga, swimming and cycling are completely safe and will not cause any problems for people with cancer. Inactivity and obesity in women have increased the risk of breast cancer in them. The reason for the increase of breast cancer in overweight women is the connection between high fat and hormonal imbalance in the body. Exercise and regular physical activity with specific hours prevent breast, ovarian, uterine and colon cancers in women and in people who are suffering from one of these cancers, it can play an effective role in reducing tumor growth and improving their physical and mental condition. The result of our studies showed that there is a relationship between stress and breast cancer. People who are frequently exposed to mental pressure and stressful events, if they have other predisposing factors to cancer, such as genes, are more likely to develop cancer, especially breast cancer. Alcohol consumption causes an increase in cancer among women, especially in people who have a previous background or have BRCA1, BRCA2 genes. The most cancers caused by alcohol consumption are breast cancer, liver cancer, oropharyngeal cancer, stomach cancer, gastric ulcer, colorectal cancer, ovarian cancer, pancreatic cancer.

**Conclusions:** There is an association between environmental pollutants and breast cancer. A large volume of environmental pollution and long exposure to these pollutions cause breast cancer. Avoiding exposure to chemicals is the best way to protect against disease.

**Keywords:** Lifestyle•cancer•breast cancer



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P-1143

## The Effect of music therapy on pain relief in adults with cancer: a systematic review Authors

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### Abstract

مقدمه: یکی از مشکلات بیماران سرطانی درد است که روش های متعددی برای تخفیف آن وجود دارد. یک روش غیر تهاجمی برای کاهش درد، موسیقی درمانی است. هدف از این مطالعه مرور سیستماتیک بررسی تاثیر موسیقی بر تسکین درد بزرگسالان مبتلا به سرطان می باشد.

SID, Magiran, و روش ها: مطالعه حاضر به شیوه مرور سیستماتیک انجام شد. جستجوی منابع اطلاعاتی فارسی و با کلید واژه های Pubmed, Scopus, web of Sciences, Ovid, Science Direct, و انگلیسی IranMedex درد، موسیقی درمانی، سرطان، بزرگسالان بود که به صورت ترکیب با هم از سال ۲۰۲۲ - ۲۰۰۴ انجام شد. تمام مقالات و مطالعات مرتبط با تاثیر موسیقی درمانی بر درد سالمندان مبتلا به سرطان جمع آوری شد و ۱۲ مقاله مورد بررسی قرار گرفت.

یافته ها: از ۱۲ مقاله ای که مرور شد ۲ مقاله فارسی و ۱۰ مقاله انگلیسی بود. تمامی مطالعات از نوع کارآزمایی بالینی بودند. ۱۰ مقاله از پژوهش های مرور شده حاکی تاثیر مثبت موسیقی بر کاهش درد بزرگسالان مبتلا به سرطان بود. ولی نتایج ۲ مطالعه که حاصل مقایسه دو روش ماساژ درمانی و آرام سازی پیشرونده عضلانی با موسیقی درمانی بود نشان دادند که دو روش ذکر شده نسبت به موسیقی درمانی در کاهش درد بزرگسالان مبتلا به سرطان ارجحیت دارند و نیاز به مطالعه بیشتر در این زمینه وجود دارد.

نتیجه گیری: با توجه به نتایج متناقض مطالعات مرور شده، پیشنهاد می گردد مطالعات بیشتر در این زمینه انجام شود.

**Keywords:** درد، موسیقی درمانی، سرطان، بزرگسالان



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P-1141

## The relationship between wearing a bra and the occurrence of breast cancer in women with breast cancer

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### Abstract

مقدمه: امروزه مشکل جدی در حوزه سلامت زنان، کنترل و پیشگیری از سرطان پستان است. از جمله حوزه های اصلی در پیشگیری از این بیماری، کنترل عوامل خطر آفرین مرتبط با سبک زندگی است. اخیراً الگوی پوشیدن سوتین، بحثهای مختلفی را به عنوان یک عامل خطر ساز سرطان پستان برانگیخته است. این مطالعه به منظور بررسی عادات رفتاری پوشیدن سوتین در زنان مبتلا و غیر مبتلا به سرطان پستان انجام شد.

روش کار: این مطالعه مورد-شاهدی بر روی زنان مبتلا و غیر مبتلا به سرطان پستان مراجعه کننده به کلینیک آنکولوژی و زنان بیمارستان امام سجاد (ع) رامسر در بازه زمانی ۱۳۹۵-۱۳۹۶ انجام شد. روش نمونه گیری به شیوه در دسترس و تعداد نمونه ها ۳۶۰ نفر (۲۰ نفر در گروه مورد و ۲۴۰ نفر در گروه شاهد) بودند. ابزار پژوهش، پرسشنامه اطلاعات دموگرافیک و عادات رفتاری پوشیدن سوتین بود. جمع آوری اطلاعات به روش خودگزارشی و از طریق پرسشنامه توسط نمونه های مورد پژوهش انجام شد. داده ها با استفاده از آمار توصیفی (درصد فراوانی، میانگین و انحراف معیار) و تحلیلی (تی نسخه ۱۸ تجزیه و تحلیل شد. سطح معنی داری کمتر از ۰/۰۵ در نظر گرفته spss مستقل و کای اسکوئر) با نرم افزار آماری شد.

یافته ها: میانگین ساعات پوشیدن سوتین در شبانه روز در گروه مبتلا و غیر مبتلا به سرطان پستان به ترتیب  $۱۹/۲ \pm ۳/۲۱$  و  $۱۷/۹ \pm ۱/۹۳$  ساعت و میانگین دفعات پوشیدن سوتین در هنگام خواب در گروه مبتلا و غیر مبتلا به سرطان پستان به ترتیب  $۵/۷۸ \pm ۱/۱۶$  و  $۴/۱۸ \pm ۰/۸۳$  دفعه در طی هفته بود. از نظر میزان ساعات پوشیدن سوتین، میانگین دفعات پوشیدن سوتین در  $(05/0 > p)$  هنگام خواب و عادت به پوشیدن سوتین تنگ بین دو گروه اختلاف آماری معنی دار وجود داشت.

نتیجه گیری: یافته های مطالعه بیانگر تفاوت در برخی عادات رفتاری پوشیدن سوتین در زنان مبتلا و غیر مبتلا به سرطان پستان است. لذا در مداخلات پیشگیرانه از سرطان پستان، آموزش زنان در جهت آگاهی از عادات رفتاری صحیح پوشیدن سوتین، باید مورد توجه قرار گیرد.

**Keywords:** سرطان پستان، عامل خطر آفرین، پوشیدن سوتین، زنان



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P-1175

## Predictors of quality of life and mental health in breast cancer survivors in Northern Iran

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### Abstract

#### Abstract

**Background and purpose** The global incidence of breast cancer is the highest among all cancers and is the primary reason for cancer-related fatalities. Our study aimed to assess the predictors of quality of life (QOL) and mental health in breast cancer survivors in Northern Iran.

**Methods** This cross-sectional study was done on 96 female breast cancer survivors between the ages of 20 and 65 and was based on convenience samples. We gathered information through demographic and fertility data, a QOL survey, and the Hospital Anxiety and Depression Scale (HADS). A significance level of  $P < 0.05$  was set for the analysis.

**Results:** In this study, results showed that 11.5% of women had the optimal quality of life, 31.3% favorable quality of life, and 57.3% undesirable quality of life. The average HADS score was  $20.14 \pm 3.07$ , with anxiety scores of  $10.21 \pm 2.31$  and depression scores of  $9.93 \pm 1.64$ . On multiple linear regression, marital relationship and the number of children were predictors of quality of life ( $\beta = -17.624$ ,  $p = 0.023$  and  $\beta = -7.427$ ,  $p = 0.016$ , respectively), as well as the husband's education and having no history of other cancers in the woman, were the most important predictors of HADS ( $\beta = 0.763$ ,  $p = 0.039$  and  $\beta = -0.528$ ,  $p = 0.016$ , respectively).

**Conclusion:** It is crucial to provide exceptional care to breast cancer patients during treatment and post-recovery. Emotional and psychological support is a fundamental requirement for their well-being.

**Keywords:** Breast cancer, Mental health, Anxiety, Depression, Quality of life



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P-1123

## Factors affecting spiritual health in cancer patients; A review study

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### Abstract

Background and purpose: Paying attention to the spiritual aspects of life, including spiritual health, is one of the solutions that lead to increasing the ability of a person to face certain challenges such as cancer. Considering the importance of spiritual health in the outcomes of cancer patients, this study reviewed factors related to spiritual health in cancer patients.

Methodology: In this review study, to search for articles, from reliable and available international databases and sources including Scopus, Web of Science, PubMed, ProQuest and Persian databases including Irandoc, idml.research, Magiran, SID with English keywords including "Spiritual health" and "cancer patients" and "related factors". These keywords in Farsi included "spiritual health", "cancer patients" and "related factors". All articles from 2000 to the end of 2023 that were in the field of spiritual health in cancer patients were included in the study. After searching, 20 articles were found, of which 15 articles met the necessary criteria to be included in the study.

Findings: The results of the review of 15 selected studies showed that factors such as age, gender, marital status and education level, religious need, psychological function, judgment about illness, life expectancy, politics, government, health, medicine and employment, satisfaction of life, physical performance, duration of hospitalization, emotional health (happiness and satisfaction with life) and physical pain were related to spiritual health of patients.

Conclusion: The findings of the above studies show that the creation and maintenance of spiritual health in cancer patients depends on many individual and environmental factors, which can be provided by education and proper management of resources and people, to provide grounds for improving spiritual health

**Keywords:** Spiritual health•cancer patients•related factors



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P-1018

## Dietary Recommendations of Breast Cancer Treatment According to Persian Medicine: a Review of Persian and Conventional Medicine Resources

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### Abstract

**Background:** Breast cancer is the commonest neoplastic cancer of women in the world which counts for approximately a quarter of all cancers.

**Methods:** In the present review, we aim to evaluate the most common plant and animal products in the food diet recommended for breast cancer treatment in Persian Medicine manuscripts. The findings reveal the retrieved links from the electronic databases between diet, plant and animal products, and cancer through key terms such as plant and animal products; diet and cancer.

**Results:** The study findings found 17 types of plant and animal products in the food diet. Scientific evidence has investigated that these products can be as anticancer agents through several mechanisms including cytotoxicity against MCF cells, being antiproliferative, containing phytosterol, polyphenol,  $\beta$ -sitostrol, flavonoid, antioxidants, as well as having anti-inflammatory and anticancer activities.

**Conclusion:** Nutritional factors play an important factor in the incidence of cancer. In this regard, Persian Medicine mentions nutrition as the first line therapy. Moreover, pharmacological studies are required to help in identification of related molecular mechanisms in the plant and animal products and their possible side effects.

**Keywords:** Iranian Traditional medicine; neoplasm; plant and animal products; food plan



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P-1099

## Factors affecting care burden in parents of children with cancer

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### Abstract

**Background:** Caring for a child with cancer is a worrying and anxiety-inducing experience for parents, which can create a significant care burden for the parents of these children. Considering the adverse effects of care burden on parents and consequently children, identifying its predictors has an effective role in improving the health of parents and their children. Therefore, the present study was conducted with the aim of investigating the factors affecting the burden of care in parents of children with cancer.

**Method:** This review study by searching the Persian and English databases PubMed, Google Scholar, Science Direct, ProQuest, Sid, Magiran, Irandoc and using the keywords "care burden, children with cancer, parents" parent was done in the period of 2014-2023. In the initial search, 301012 Persian and English articles were found. After removing the similar and irrelevant studies, finally 10 studies were fully reviewed.

**Result:** the review of studies showed that factors such as patient gender, early diagnosis of the disease, family distress index, increase in the duration of the disease, age of the caregiver and the child (the increase in the age of the parents was directly related to the increase in the burden of care), economic status, education of the mother, education of the child, the type of cancer, the number of hospitalized children, the severity of the disease, the type of family in terms of being single-parent or two-parent, the functional status of the patient, the type of parental communication are effective in predicting the care burden of caregivers of children with cancer.

**Conclusion:** Taking care of children with cancer from a mental, physical, economic, and psychological point of view can impose a great care burden on the family and caregivers of cancer patients, and this care burden can affect the manner and quality of care and cause harm to the patients themselves. Therefore, it is necessary to provide the necessary training to the staff and families in order to adjust the factors affecting the burden of care and as a result to reduce the burden of care in the caregivers of children with cancer and to plan in order to reduce it.

**Keywords:** Care burden, Children with cancer, parent



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P-1114

## Liquid Biopsy Of Circulating Cell-Free DNA For Cancer Early Detection

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### Abstract

**Background:** Effective screening modalities are currently available for only a small subset of cancers, and they generally have suboptimal performance with complicated procedures. Therefore, there is an urgent need to develop simple, accurate, and non-invasive methods for early detection of cancers. As a noninvasive approach, liquid biopsy has great potential to be the biomarkers for the early detection, recurrence monitoring, and prognosis of cancer. Circulating tumor DNA (ctDNA) is a promising biomarker that carries cancer-specific genetic and epigenetic aberrations, which therefore can be used as a surrogate source of tumor DNA in cancer diagnosis and prognosis prediction.

**Methods:** This study was a review study that conducted by using PubMed and Science Direct databases by using keywords of Cancer; cfDNA. Finally 14 out of 9688 results up to 2023 were examined in detail.

**Results:** Liquid biopsy is capable of detecting cancers through detecting circulating tumor cells, exosomes, proteins, or metabolites, mRNA, microRNAs (miRNAs), cfDNA, etc. Mutation, methylation, and fragment patterns are the main sequenced biomarkers of cfDNA for the early detection of cancers. Whole-genome sequencing (WGS) has revealed that tumor-derived cfDNA (circulating tumor DNA [ctDNA]) is in general shorter than non-tumor DNA. The clinical test performance of blood-based ctDNAs as a diagnostic tool has shown 75% sensitivity and 89% specificity, indicating blood-based ctDNA analysis of cancer mutations is a specific, minimally invasive test for the diagnosis of cancer. The detection of tumor-derived cell-free DNA in plasma is one of the most promising directions in cancer diagnosis. The major challenge in such an approach is how to identify the tiny amount of tumor DNAs out of total cell-free DNAs in blood. An ultrasensitive cancer detection method is proposed, termed 'CancerDetector', using the DNA methylation profiles of cell-free DNAs. The key of this method is to probabilistically model the joint methylation states of multiple adjacent CpG sites on an individual sequencing read, in order to exploit the pervasive nature of DNA methylation for signal amplification. Therefore, CancerDetector can sensitively identify a trace amount of tumor cfDNAs in plasma, at the level of individual reads. DNA methylation plays a key role in various Diseases, including cancer and other diseases. Hypermethylation in tumor suppressor genes or Hypomethylation in oncogenes is an important event in tumorigenesis. Among genomic and epigenomic alterations, the methylation of CpG sites provides not only tissue-specific information, but also cancer-specific information, making it a promising approach for early detection of multi-cancers.



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Conclusions: Clinical applications of liquid biopsy for early cancer detection still remains a substantial challenge. Even a minor lack in assay specificity would lead to numerous false-positive results, causing avoidable concern of patients and enormous subsequent diagnosis costs, while false-negative results would retard important therapeutic interventions. Although numerous studies have demonstrated the potential of ctDNA as biomarkers for early detection and diagnosis of cancer, there still remain some crucial challenges that need to be addressed. For early-stage cancer, very little ctDNA is present and the genomic profiles in the original tumor are unknown, so the detection assays should be extremely sensitive.

**Keywords:** Cancer·cfDNA·Liquid Biopsy



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P-1121

## Investigating the toxicity effect of wheat germ oil on cervical cancer of Hela cell line

نوابه زمانی - فرخنده نعمتی - رویا بیشه کلایی - عباسعلی دهپور جویباری

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### Abstract

سابقه و هدف: سرطان دهانه ی رحم به عنوان یکی از شایع ترین سرطان های زنان در سراسر دنیا و عمده ترین علل مرگ ناشی از سرطان در زنان شناخته می شود. فرآورده های طبیعی استخراج شده از گیاهان دارویی می توانند نقش مهمی در درمان سرطان داشته باشند. بنابراین هدف از این مطالعه بررسی تاثیر غلظت های مختلف روغن جوانه ی گندم بر روی می باشد. Hela سلول های سرطانی رحم رده سلولی

، سلول ها در مجاورت غلظت های مختلف روغن جوانه ی گندم Hela مواد و روش ها: پس از کشت رده سلولی قرار گرفتند و به مدت ۲۴، ۴۸ و ۷۲ ساعت انکوبه شدند. جهت تعیین سمیت سلولی از آزمون رنگ سنجی (30000-65/14) استفاده شد MTT.

یافته ها: نتایج نشان داد که جوانه ی گندم در غلظت های مختلف، رشد سلول ها را به طور معنی داری نسبت به گروه کنترل تاثیر روغن جوانه ی گندم بر روی مهار رشد سلول ها وابسته به غلظت و زمان بود و بیشترین درصد ( $p < 0.05$ ) کاهش داد. مهار رشد سلول ها در غلظت ۳۰۰۰۰ میکروگرم بر میلی لیتر برابر ۹۵/۹۶ درصد و در مدت زمان ۷۲ ساعت بدست آمد. به میزان ۱۰۲۰۴/۵ میکروگرم بر میلی لیتر محاسبه شد IC50 همچنین مقدار

نتیجه گیری: نتایج این پژوهش پیشنهاد می کند که غلظت های مختلف جوانه ی گندم دارای سمیت سلولی علیه رده سلولی Hela می باشد. بنابراین به منظور پیدا کردن مکانیسم های اساسی این فعالیت، تحقیقات بیشتری باید انجام شود.

**Keywords:** سرطان Hela، جوانه ی گندم، رده سلولی MTT آزمون



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P-1024

## Investigating the lifestyle of gastric cancer patients focusing on their nutritional habits: a review study

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### Abstract

زمینه و هدف

سبک زندگی و عادات فردی در بروز سرطان تأثیر ویژه ای دارند. چاقی، کم تحرکی، تغذیه ناسالم، آلودگی آب، هوا و غذا و عفونت های مزمن ویروسی از عوامل خطرزای اصلی در بروز انواع سرطان ها میباشند. لذا هدف از مطالعه حاضر بررسی سبک زندگی بیماران مبتلا به سرطان معده با تمرکز بر عادات تغذیه ای آنها می باشد.

مواد و روش ها

در این مطالعه مروری برای جستجو و یافتن مقالات موجود، از جستجو در پایگاه های داده ای ملی و بین المللی شامل Pubmed, Google scholar, Web of Science, Scopus, SID, Magiran معده "سرطان معده" و از کلید واژه های "سرطان معده" و "عوامل خطر" و "life style"، "سبک زندگی"، "Feeding behaviors"، "عادات تغذیه ای"، "Gastric cancer" استفاده شد. معیار های ورود به مطالعه شامل مطالعات مرتبط با موضوع به زبان فارسی و انگلیسی، "Risk factors" تاریخ انتشار بین ۲۰۰۰ تا ۲۰۲۲ و دسترسی به متن کامل مقالات بود. پس از بررسی کیفیت مقالات با استفاده از دستورالعمل پریزما و معیار های ورود و خروج مقالات، در نهایت ۲۰ مقاله انتخاب شد و نتایج آنها بررسی گردید.

یافته ها

بین رفتار های تغذیه ای و خطر ابتلا به انواع سرطان ها ارتباط مستقیم وجود دارد و از سویی اتخاذ رفتار های تغذیه ای و سبک زندگی مناسب نقش مهمی در پیشگیری از ابتلا دارد. مصرف بیش از حد پروتئین، چربی، نمک یا گوشت خطر ابتلا به سرطان معده را افزایش میدهد. برعکس رژیم غذایی سرشار از فیبر، سبزیجات و میوه ها نقش مهمی در پیشگیری از سرطان معده دارند.

بحث و نتیجه گیری

افزایش آگاهی درباره سرطان معده و آموزش درباره عوامل خطر آن، از اهمیت بالایی برخوردار است. شناخت عوامل تعیین کننده ی تغذیه سالم بخصوص از نگاه افرادی که دارای تجربیات مستقیم در این زمینه هستند، نقش مهمی را در طراحی برنامه های مداخله ای ترویج تغذیه سالم ایفا مینماید؛ بنابراین پژوهش هایی که بتوانند با تکیه بر شرایط و نیاز های واقعی افراد، برنامه هایی برای اصلاح الگوی تغذیه ای جامعه ارائه دهند، از جمله اولویت های بهداشتی جامعه امروز می باشند.

**Keywords:** سرطان، سرطان معده، سبک زندگی، عادات تغذیه ای، عوامل خطر



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P-1047

## Role of intestinal microbiome in inflammatory-mediated colorectal cancer development

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### **Abstract**

**Background:** Gut microbiome has a vital role in immune dysregulation/ inflammation. Colorectal cancer (CRC) is one of most widespread carcinoma. Impact of dysregulated intestinal microbiome on CRC establishment and upregulated inflammatory response at site of several CRCs have been reported. Moreover inflammation has an important role in cancer initiation. In this study, gut microbiome influence on inflammatory-mediated colorectal cancer development has been assessed .

**Methods:** Published articles from years 1970 up to now were reviewed exactly. The key words "microbiome, inflammation, colorectal and cancer" were used. Related papers were studied and abstracted.

**Results:** Intestinal microbiota comprises various microorganisms with immunomodulatory effects. Altered microbial composition, partially controlled by nutrition, could promote carcinogenesis somewhat through inflammatory dysregulation.

In healthiness, noticeable inhabitant bacteria are gram- bacteroides and gram+ firmicutes. Variations of normal microbial composition might result in replace of obligate bacteria by dangerous microorganisms (including Helicobacter hepaticus) modify T-cell populations in lamina propria cause inflammatory-mediated CRCs. Upregulation of inflammatory cells in site of many CRCs has been found could dysregulate cytokines able of cancer promotion. Interleukin-1 (IL-1) and IL-18 have essential role in defense against polyp development and inflammation-driven CRC. A relationship between Escherichia coli, IL-10 absence in lumen and inflammation-induced CRC has been shown. Enterotoxigenic bacteriodes fragilis promotes colonic tumorigenesis through IL-17 mediated inflammation.

**Discussion:** Gut microbiota has strong effect on intestinal immune system and plays an important role in inflammatory dysregulation leading to CRC development. Adaptation of gut microbiome may be effective in modulation of inflammation which might be a potential therapeutic approach in CRC improvement.

**Keywords:** Microbiome·Cancer·Inflammation·Colorectal



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P-1162

## Examining the Health Literacy Status of Medical Librarian Students and the Role of Clinical Librarians in Cancer Prevention

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### Abstract

**Background:** Health information literacy and health beliefs are key factors with cancer. Health literacy refers to an individual's ability to obtain, interpret, and comprehend essential health information and services necessary for making informed decisions. Health literacy is not solely the responsibility of individuals; health systems, services, and health professionals must also provide the necessary resources for health literacy on a broader scale. The findings indicate that different types of health literacy (functional, interactive and critical) are required in decision-making. The basis of this research was the potential role of librarians in cancer prevention by enhancing students' health literacy. This study aimed to assess the health literacy of medical librarian graduate students at Shahid Beheshti University of Medical Sciences and Tehran university in 2023.

**Methods:** This descriptive-analytical study was conducted at paramedical faculties of Shahid Beheshti University of Medical Sciences in Iran. The research included 35 undergraduate, master's, and doctoral students selected through convenience sampling. Data was collected using demographic and health literacy questionnaires for Iranian adults. The questionnaire's reliability was confirmed through an Alpha-Cronbach test with a score of 0.79. The health literacy questionnaire consisted of two parts: demographic information (age, gender, degree, semester, marital status) and components of health literacy (sources of health and disease information). The health literacy section comprised 33 questions covering access, reading skills, understanding, evaluation, and decision-making regarding health information. Responses were rated on a 5-point Likert scale, with scores ranging from 33 to 165. Lower scores indicated lower health literacy, while higher scores indicated better health literacy. Data was analyzed using SPSS 21 software with descriptive statistics, Kolmogorov-Smirnov, Mann-Whitney, and Kruskal-Wallis tests at a significance level of 0/05%.

**Results:** The average health literacy score was  $83.86 \pm 14.26$  out of 100. Participants demonstrated inadequate health literacy (13.21%), marginal health literacy (21.20%), adequate health literacy (36.08%), and excellent health literacy (28.43%). Health literacy did not show a significant correlation with educational level or college attended by the students ( $p < 0.05$ ).

**Conclusion:** Health Literacy is one of the most important indicators of health knowledge. The students' health literacy in cancer-related topics was found to be at a satisfactory level. The study also revealed a relationship between health literacy and students' educational level and college.



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Librarians can play a crucial role in enhancing health literacy among students, contributing to cancer prevention efforts.

**Keywords:** clinical librarian, health literacy, cancer, students, health promotion.



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P-1159

## Evaluating the level of satisfaction of cancer patients with self-care training received from doctors and nurses for 16 months in Abbas Nazeran Oncology Hospital

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### Abstract

Background: special attention to the self-care educational needs of cancer patients in a patient-centered environment is one of the important aspects of their care. The charter of patient rights requires that doctors and nurses play their role well in responding to the educational needs of these patients in the field of self-care. The continuous satisfaction of patients with the received training is a good measure for evaluating this performance. (1) If correct information is obtained and the processes are modified, one can hope to improve the lifestyle and independence of patients in self-care by reducing the length of hospitalization, reducing re-visits and lead to cost savings. (2) Examining the current situation is the first step to address this issue, so that in the next steps, the effective factors that can be improved in this regard. Few studies have been done about the satisfaction of cancer patients with self-care training. The conducted studies often deal with the effective factors in the quality of education. No study was found on the comparison of cancer patients' satisfaction with the training of doctors and nurses. The purpose of this study is to describe the current situation in this regard.

Methods: This cross-sectional descriptive research uses a 12-question questionnaire with valid (form-content) and good reliability (Cronbach's alpha coefficient 0.954). This online questionnaire was sent during 16 months to the target group (338 patients with malignancy) in Abbas Nazeran Oncology Hospital in Mashhad. Doctors and nurses did not know about this survey. The results were analyzed using SPSS 19 software (T-test).

Results: The level of patients' satisfaction with the training received from nurses and doctors was evaluated from medium to high (75.45%). A significant difference was seen in the overall satisfaction level of patients with the training received from doctors compared to nurses ( $P < 0.001$ ). A significant difference was seen in each of the twelve items ( $P < 0.001$ ).

Conclusions: Overall satisfaction and satisfaction in each item about the training received from the group of doctors was significantly higher ( $P < 0.001$ ). Training related to activity resumption, activity restriction, diet and drug precautions in both groups of nurses and doctors got a lower satisfaction score. Therefore, in order to increase the level of satisfaction of service recipients, especially in the mentioned areas, the following suggestions seem useful (3,4,5,6,7):

Strategic management of human resources, selection of competent people in patient education, use of effective motivation system, professional communication of doctors and nurses, training of



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nurses and doctors in order to strengthen general skills (creativity, time management, communication skills, etc.).

Also, it is recommended to update the knowledge of experts about common cancers, the necessary educational codes and written programs related to each disease in order to increase the satisfaction level of patients. (2)

**Keywords:** Cancer•Doctors•self-care•Satisfaction•Patient Education•Nurses



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P-1164

## The Interplay between Testicular Cancer and Infertility: A Comprehensive Review

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### Abstract

Testicular Cancer and infertility are two distinct medical conditions that can significantly impact an individual's quality of life. While cancer poses a threat to overall health and survival, infertility can lead to emotional distress and challenges in family planning. This review manuscript aims to explore the intricate relationship between Testicular cancer and infertility, shedding light on the underlying mechanisms, treatment approaches, and the impact on patients' reproductive health. Certain genes, including BRCA1, BRCA2, TP53, RB1, DNA repair genes, and hormone receptor genes, are involved in both cancer and infertility. These genes play various roles in regulating the cell cycle, DNA repair, and hormone signalling. Mutations in these genes can increase the risk of cancer and also lead to fertility issues by disrupting reproductive organ development, hormonal imbalances, and impaired DNA repair. Understanding the interactions and mechanisms of these genes can help identify individuals at risk and develop targeted interventions for both cancer prevention and fertility preservation. By understanding this complex interplay, healthcare professionals can provide comprehensive care and support to individuals affected by both cancer and infertility.

**Keywords:** Testicular Tumors, Sertoli Cell Tumor, Leydig Cell Tumor, Infertility, Azoospermia



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P-1160

## Diagnosis of gestational cervical cancer- Review study

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دانشگاه علوم پزشکی کاشان

### Abstract

مقدمه: بارداری عارضه با سرطان دهانه رحم به سرطان دهانه رحم که در دوران بارداری فعلی و همچنین مواردی که ۶ تا ۱۲ ماه پس از زایمان تشخیص داده می شود، اطلاق می شود. هدف این مطالعه مرور مطالعات موجود در مورد سرطان سرویکس در حاملگی است.

پرداخته است. کلیه مقالات مروری، Pubmed, googlescholar، روش: این مطالعه مروری به بررسی مطالب موجود در مداخله ای، توصیفی و گزارش موردی از سال ۲۰۱۵ تاکنون در مطالعه وارد شد. برای جستجوی مطلب از کلمات کلیدی، سرطان سرویکس بارداری، حاملگی در عنوان مقالات استفاده شد. پس از حذف مطالعات تکراری و غیرمرتبط در نهایت تعداد ۴ رفرنس مورد مطالعه قرار گرفت.

یافته ها:

علائم بالینی - سرطان دهانه رحم در زنان باردار به مرحله بالینی و قطر تومور مرتبط است. بارداری با مراحل اولیه سرطان دهانه رحم معمولاً علامت واضحی ندارد. تعداد کمی از بیماران ترشحات واژن همراه با بوی بد، ترشحات چرکی یا خونی و خونریزی نامنظم واژن را نشان می دهند. در مراحل پیشرفته تر درد ناشی از تومورها یا کم خونی مزمن ناشی از خونریزی نامنظم طولانی را نشان می دهند که این علائم با سایر بیماری های دوران بارداری یا نفاس اشتباه گرفته می شود. تومور در اندازه قابل مشاهده ممکن است وجود داشته باشد.

غربالگری و تشخیص - غربالگری بارداری با سرطان دهانه رحم از "مدل سه مرحله ای" یعنی سیتولوژی دهانه رحم، کولپوسکوپی و بیوپسی دهانه رحم پیروی می کند. سیتولوژی دهانه رحم اولین انتخاب تشخیصی در بارداری است روش های با از دست دادن بارداری و هیچ عارضه ای مرتبط نیستند. تغییرات استروژن و پروژسترون در HPV پاپ اسمیر و تست بارداری منجر به هیپرپلازی غدد مخاط سرویکس، مهاجرت محل اتصال سلول های سنگفرشی-استوانه ای، تکثیر فعال سلول های بازال، مورفولوژی نامنظم سلولی و بزرگ شدن هسته ها می شود که به راحتی با ضایعات داخل اپیتلیال سنگفرشی اندوسرویکال دهانه رحم منجر به بازرسی آسان (eversion) یا حتی سرطان مهاجم اشتباه می شوند. در مقابل، بیرون زدگی تر اتصال سنگفرشی می شود و بنابراین ممکن است آمپلینگ اندوسرویکال بدون به خطر انداختن حساسیت پاپ اسمیر حذف شود.

کولپوسکوپی بهتر است در سه ماهه اول و دوم بارداری انجام شود. اندیکاسیون های کولپوسکوپی عبارتند از: ۱. خونریزی واژینال یا خونریزی تماسی به جز عوامل مرتبط با زنان و زایمان، ۲ - ناهنجاری های آشکار در دهانه رحم، ۳- ضایعات مشکوک به سرطان مهاجم.

نتایج غربالگری سیتولوژی دهانه رحم که معیارهای ارجاع برای کولپوسکوپی را داشته باشد -4

را تشخیص می دهد، بیوپسی ضروری نیست (L-SIL) هنگامی که سیتولوژی و کولپوسکوپی ضایعه با درجه پایین

(pouch) یا سلول های سنگفرشی آتیپیک بیوپسی کیسه ای (H-SIL) برای ضایعات داخل اپیتلیال سنگفرشی درجه بالا تحت هدایت کولپوسکوپی توصیه می شود (biopsy).



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ترجیحاً (flat) ، بیوپسی مخروطی مسطح (micro-invasive) در صورت مشکوک بودن کولپوسکوپی به میکرواینویژن بین هفته سیزدهم و بیستم بارداری توصیه می شود.

نظارت بر ضایعات باید به صورت ماهانه انجام شود. در سه ماهه سوم به دلیل افزایش حجم دهانه رحم، نظارت مشکل است و می توان آن را حذف کرد.

بیوپسی دهانه رحم برای ضایعات درجه بالای دهانه رحم یا سرطان های مشکوک را می توان با کولپوسکوپی یا چشم غیر مسلح انجام داد. اما کورتاژ کانال دهانه رحم در دوران بارداری باعث افزایش میزان سقط و زایمان زودرس می شود.

اسکن چندسطحی باید اندازه و محور رحم باردار را در نظر بگیرد.

بیوپسی غدد لنفاوی نگهبان منع مصرف دارد، اما به نظر می رسد ایندوسیانتین سبز یک جایگزین باشد.

مانند زنان غیرباردار، استاندارد طلایی برای ارزیابی تومور اولیه است، اما (MRI) تصویربرداری رزونانس مغناطیسی فاقد ویژگی در ارزیابی غدد لنفاوی است.

به طور معمول توصیه PET لاپاراسکوپی- وضعیت غدد لنفاوی یکی از مهمترین عوامل پیش آگهی است و از آنجایی که نمی شود، استاندارد طلایی برای ارزیابی غدد لنفاوی توسط جراحی لاپاراسکوپی ارائه می شود.

نشانه های سرمی - در نئوپلازی دهانه رحم، نشانگرهای سرمی بسیاری به عنوان ابزاری برای ارزیابی پیش آگهی و پاسخ P16INK4a پرخطر، HPV در Ki-67 به درمان و پیش بینی عود بیماری پیشنهاد شده است. تغییرات نشانگر پرولیفراتیو در گزارشات مورد استفاده بوده است TERC به عنوان پروتئین سرکوبگر تومور و

نتیجه گیری: تظاهرات بالینی حاملگی با سرطان دهانه رحم غیر معمول است، به راحتی با بیماری های بارداری اشتباه گرفته می شود، به راحتی در وضعیت بارداری پنهان می شود و تشخیص آن دشوار است. معاینات قبل از تولد اغلب توسط زنان باردار نادیده گرفته می شود که تشخیص تومورها را دشوار می کند. بنابراین، غربالگری مرسوم "سه مرحله ای" برای سرطان دهانه رحم در بارداری ضروری است.

**Keywords:** سرطان سرویکس حاملگی، زنان، تشخیص



P-1172

## Efficacy of Psychological Interventions on Psychological and Vasomotor Symptoms in Menopausal Women With Breast Cancer: A Systematic Review and Meta-Analysis

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### Abstract

**Background:** The intersection of menopause and breast cancer often impairs patients' quality of life due to the accompanying physical and psychological burdens. This study examines the efficacy of mindfulness and cognitive-behavioral therapy (CBT) on menopausal breast cancer patients' physical and psychological symptoms.

**Methods:** In this PROSPERO-registered (CRD42021275803) meta-analysis conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses protocol, clinical trials published no later than December 31, 2021, that were in the PubMed, Web of Science, Scopus, and Cochrane Library databases were reviewed. Eight studies, with sample sizes ranging from 21 to 255, were assessed using the quality assessment checklist and the Cochrane risk of bias tool.

**Results:** A random-effects meta-analysis demonstrated significant improvement in vasomotor symptoms, namely hot flashes and night sweats, following mindfulness-based and CBT interventions (Standardized Mean Difference (SMD) = 0.961, 95% CI: 0.662 to 1.260,  $p = 0.000$ ). These interventions also significantly alleviated anxiety (SMD = 0.332, 95% CI: 0.146 to 0.517,  $p = 0.000$ ), alleviated depression (SMD = 0.766, 95% CI: 0.199 to 1.332,  $p = 0.008$ ), and improved sleep quality (SMD = 1.008, 95% CI: 0.411 to 1.602,  $p = 0.001$ ).

**Conclusion:** Mindfulness and CBT interventions can notably mitigate physical symptoms and mental health issues in menopausal breast cancer patients, potentially ameliorating the side effects of pharmacological treatments.

**Keywords:** Breast Cancer•Psychological Interventions•Systematic Review and Meta-Analysis



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P-1118

## Fruit and vegetable intake in relation to gastric cancer risk: A comprehensive and updated systematic review and dose-response meta-analysis of cohort studies

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### Abstract

**Background:** Since the release of previous meta-analyses, some studies on the associations between fruit and vegetable intake with gastric cancer risk have been published. Therefore, we aimed to update the previous meta-analyses on these associations by including recently published studies as well as considering the main limitations of those meta-analyses.

**Methods:** comprehensive search was conducted in online databases including PubMed, Scopus, ISI Web of Science, and Google Scholar to detect relevant prospective cohort studies published up to October 2021. Summary relative risks (RRs) were estimated using a random-effects model

**Results:** Overall, 17 articles containing 18 prospective studies with a total sample size of 1,527,995 participants, aged between 18 and 90 years, were included in the current meta-analysis. During the follow-up periods ranging between 4.5 and 21 years, 8,477 cases of gastric cancer were diagnosed. A higher intake of total fruit [RR: 0.87, 95% confidence interval (CI): 0.80 to 0.94, I<sup>2</sup> = 0%] and total fruit and vegetable (RR: 0.75, 95% CI: 0.61 to 0.93, I<sup>2</sup> = 55.2%) were associated with a lower risk of gastric cancer. For total vegetable intake, a significant inverse association was found among the studies that controlled their analysis for energy intake. Based on the linear doseresponse analysis, each 100 g/day increase in total fruit intake (Pooled RR: 0.95, 95% CI: 0.90 to 0.99, I<sup>2</sup> = 49%) and 200 g/day increase in total fruit and vegetable intake (RR: 0.94, 95% CI: 0.88 to 0.99, I<sup>2</sup> = 37.6%) were associated with a 5 and 6% lower risk of gastric cancer, respectively.

**Conclusion:** Fruit and vegetable consumption has a protective association with gastric cancer risk.

**Keywords:** fruit•gastric cancer•vegetable•citrus•meta-analysis



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P-1149

## Unveiling the Potential of Medical Nanotechnology in Early Cancer Detection: A Frontier in Oncology Diagnostics

Sonia Fathi - Reza Maleki baladi

دانشگاه علوم پزشکی خراسان شمالی - دانشگاه آزاد اسلامی واحد بجنورد

### Abstract

**Introduction:** The application of nanotechnology in oncology diagnostics, specifically for early detection of cancer, marks a major frontier in medical research. This review article aims to explore the promising potential of using nanotechnology as a refined tool for detecting cancer in its early stages. This approach seeks to leverage the unique properties of nanoparticles, such as their reactive nature and high surface-to-volume ratio, to enhance the precision and efficiency of oncology diagnostics.

**Methods:** An in-depth review and critical analysis were undertaken to understand the role of nanotechnology in medical diagnostics, focusing on the utilization of fluorescent nanoparticles for Molecular Imaging (MI). Considerations were given to a range of existing studies detailing advanced diagnostics methods and their application in early detection, response monitoring, and in vivo visualization of living cells. Additionally, thorough attention was paid to the synthesizing methods of these nanoparticles and their prospective application in clinical theranostics.

**Results:** Encouraging findings revealed that the application of nanotechnology in fluorescence imaging and Magnetic Resonance Imaging (MRI) could potentially result in earlier and more accurate diagnosis of cancer than conventional imaging methods. The distinct capabilities of nanoparticles for targeted drug delivery and gene treatment proved particularly promising. Furthermore, it was found that fluorescent nanoparticles - including quantum dots (QDs), upconversion, and dyedoped nanoparticles - played a significant role in optical MI. Multifunctional nanoparticles were determined to be effective theranostic agents, useful for diagnosis and therapy simultaneously.

**Conclusion:** The potential for medical nanotechnology in early cancer detection is vast and offers a compelling pathway for advancements in oncology diagnostics. Notwithstanding its promising attributes, comprehensive studies and clinical trials are warranted to validate the safe and efficient application of nanotechnology in clinical settings. By focusing on fluorescent nanoparticles, the research presents a promising avenue for more timely and precise cancer detection, thus leading to effective treatment planning. This investigation assertively supports the continued exploration and development of nanotechnology as a diagnostic method, paving the way for unprecedented innovation in oncology diagnostics.

**Keywords:** Medical nanotechnology, Early cancer detection, Oncology diagnostics, Fluorescent nanoparticles, Molecular imaging



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P-1153

## Association between Allium vegetables and lung cancer: A review

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### **Abstract**

**Background:** Lung cancer is one of the most common malignancies and the main cause of cancer deaths worldwide. Evidence regarding relationship between consumption of allium vegetables and lung cancer is contradiction. There are also limited reviews in this area. Therefore, the aim of this review was to discuss the effects of allium vegetables on lung cancer and involved mechanisms in this issue.

**Discussion:** Some studies found a significant relationship between consumption of vegetables containing allium such as garlic, onions or leeks with decreased risk of lung cancer; whereas, others reported no significant findings in this field.

**Conclusion:** Although some studies reported a significant relation between allium vegetables consumption and decreased lung cancer risk, but others found non-significant results. Therefore, it is necessary to conduct more studies especially cohort studies in order to obtain more accurate and conclusive scientific evidence

**Keywords:** Lung cancer, Allium vegetables, Lung neoplasm, Onion, Garlic



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P-1078

## Complications of Chemotherapy Drugs in the Process of Cancer Treatment

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### Abstract

**Introduction:** Chemotherapy is one of the most effective treatments for all types of cancer. But like other treatments, it often causes side effects. Using strong chemical drugs to stop the growth of cancer cells can also affect healthy cells and cause problems for the patient. Some side effects are short-lived and others may have long-term effects. The side effects of chemotherapy can be different for each person and it depends on the type of cancer, its location, drugs and their dosage, and the general health status of the patient.

**Methods:** In total, 35 articles with a time limit of the last 5 years were obtained by deleting 9 articles whose full text Not available; finally, 26 articles were included in the study

**Results:** The side effects that chemotherapy drugs may cause in the body depend on the drug composition and the severity of the body's reaction to the drug. The side effects of chemotherapy drugs are temporary and transient, and the patient does not suffer from all side effects. Therefore, mentioning the complications is only for the purpose of knowing them better and knowing the appropriate solution to deal with it.

**Conclusion:** Many side effects of chemotherapy can be minimized by timely diagnosis, correct adjustment of drug dosage and preventive measures. It is also necessary to improve the level of awareness of the patient and his family regarding the complications caused by the need for chemotherapy in order to help manage the complications.

**Keywords:** Complications, Chemotherapy Drugs, Cancer Treatment



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P-1158

## Effects of 8 weeks Interval Training on inflammatory and Proinflammatory indicators Serum Levels and Diagnostic marker in Males With Prostate Cancer

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### Abstract

هدف: سرطان پروستات چهارمین سرطان شایع در دنیا و شایع ترین سرطان در مردان است و از نظر علت مرگ های مربوط به سرطان در مردان مسن تر از ۵۰ سال، پس از سرطان ریه در مکان دوم قرار دارد. عوامل التهابی در ایجاد و توسعه این بیماری نقش مهمی دارند. هدف از این پژوهش اثر ۸ هفته تمرین تناوبی بر سطح سرمی برخی شاخص های التهابی، ضد التهابی، و مارکر تشخیصی در مردان مبتلا به سرطان پروستات است.

مواد و روش ها: در این مطالعه کارآزمایی بالینی تعداد ۳۰ نفر (سن: ۶۰/۲۰±۳/۱۲ سال، وزن: ۷۳/۷۶±۴/۴۹ کیلوگرم، شاخص توده بدنی ۲۵/۶۵±۱/۳۱) به صورت هدفمند و در دسترس انتخاب و به صورت تصادفی به دو گروه تجربی (۱۵ نفر) و کنترل (۱۵ نفر) تقسیم شدند. فعالیت ورزشی فقط برای گروه تجربی بود و گروه کنترل هیچ مداخله ورزشی دریافت نکردند. گروه تجربی به مدت هشت هفته و هر هفته به مدت سه جلسه تمرین تناوبی را انجام می شد. برای اجرای برنامه تمرین تناوبی، ابتدا آزمودنی ها به مدت ۵ دقیقه با شدت ۵۰-۷۰ درصد بیشینه ضربان قلب (۶۰-۵۰ درصد حداکثر اکسیژن مصرفی) دویده و پس از گرم شدن بدن، چهار تناوب ۴ دقیقه ای را با شدت ۸۵-۹۵ درصد بیشینه ضربان قلب (۹۰-۸۰ درصد حداکثر اکسیژن مصرفی) و سه تناوب ۳ دقیقه ای در میان تناوب های چهار دقیقه ای با شدت ۵۰-۷۰ درصد حداکثر ضربان قلب (۶۰-۵۰ درصد اکسیژن مصرفی) اجرا می کردند. سرانجام، به مدت سه دقیقه نیز با شدت ۷۰-۵۰ درصد حداکثر ضربان قلب، IL-6، TNF-α، CRP، PSA، IL-10، CRP، TNF-α، PSA، IL-10 نیز سنجی های تن سنجی نیز انجام شد. سطح معناداری ۰/۰۵ در نظر گرفته شد.

نتایج: نتایج پژوهش حاضر نشان داد، ۸ هفته تمرین تناوبی باعث کاهش معنادار مقادیر PSA، CRP، TNF-α، IL-6، IL-10 همچنین نتایج پژوهش حاضر نشان داد، ۸ هفته تمرین تناوبی باعث افزایش معنادار مقادیر (P<0/05) شد، IL-6، CRP، TNF-α، PSA، IL-10 نتایج این تحقیق نشان داد که در گروه کنترل معنادار مقادیر (P<0/05) مردان مبتلا به سرطان پروستات گردید. هیچ گونه تغییر معنی داری وجود نداشت PSA، CRP، TNF-α، PSA.

بحث و نتیجه گیری: با توجه به یافته های حاضر و مقایسه ی آن با سایر پژوهش های موجود در حوزه فعالیت های ورزشی و سرطان پروستات، به نظر می رسد که فعالیت ورزشی آثار سودمندی را برای این افراد به همراه دارد. هر چند که هدف پژوهش حاضر مطالعه اثر ۸ هفته تمرین منظم تناوبی بر شاخص های منتخب تشخیصی سرطان پروستات، شاخص های منتخب التهابی در مردان مبتلا به سرطان پروستات بود، اما سازوکارهای محتمل وابسته به فعالیت ورزشی بر این آثار هنوز به خوبی مشخص نشده است. یافته های این پژوهش نشان داد که بسیاری از عوامل رخداد و باز رخداد سرطان پروستات، به خوبی از فعالیت های ورزشی اثر می پذیرند. نتایج این پژوهش در مجموع نشان تمرینات تناوبی باعث کاهش عوامل رخداد و باز رخداد سرطان پروستات و افزایش عوامل جلوگیری کننده از سرطان پروستات می شود.

**Keywords:** PSA تمرین تناوبی، التهاب، ضد التهابی، پروستات،



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P-1157

## A Poison as Perilous as Cancer: Pediatric Cancer and the Financial Toxicity Faced by Parents

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### Abstract

**Introduction:** In the sphere of pediatric oncology, where the battle against childhood cancer unfolds, a profound and complex challenge looms the concept of "financial toxicity." Financial toxicity occurs when patients, families, and households experience "financial burden and distress" as a result of their healthcare expenses. However, the concept of financial toxicity has not been extensively explored in pediatric oncology. Recent research suggests that financial toxicity is not exclusive to adult cancer patients and may occur in pediatric oncology and persist even beyond the active treatment phase, affecting survivorship or bereavement. The aim of this study is to investigate and assess the presence of financial toxicity in the context of pediatric oncology .

**Method:** To answer the research question, a literature review was conducted. This review encompassed relevant studies related to the financial challenges faced by parents and caregivers of children with cancer, with a specific focus on the psycho-social and economic aspects of this burden.

**Results:** The findings of recent studies imply that financial toxicity occurs in pediatric oncology and can persist beyond the active treatment phase into survivorship or bereavement. pediatric cancer imposes substantial direct and indirect costs on families. Direct costs encompass out-of-pocket expenses, with travel-related costs being a significant contributor, especially for families residing far from treatment centers. Indirect costs involve disruptions in parental employment, often leading to one parent leaving paid work to care for the child. However, the ramifications of this financial burden extend beyond monetary considerations and entail somatic and psychological tolls. These stress-related symptoms (anxiety, depression, fatigue, cognitive impairments, and post-traumatic stress) intensify parents' symptom burden and suffering. In response to these formidable challenges, parents often resort to financial coping mechanisms, inadvertently jeopardizing their own health and well-being. Remarkably, the shadow of financial toxicity persists even after the active treatment phase. The results show that parents grapple with workforce re-entry difficulties, perpetuating financial distress. Importantly, lower family incomes may also wield influence over children's health outcomes, potentially resulting in suboptimal medication adherence and compromised medical outcomes

**Conclusion:** In conclusion, financial toxicity is a problem in pediatric oncology that occurs due to the financial burden for the families of affected children during and after cancer treatment and the related negative consequences affecting the quality of life and emotional health of parents. It underscores the imperative for recognition and concerted action, calling for the development of



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targeted interventions, support systems (including both governmental and charitable supports), assessment of risk for financial hardship (such as per-existing low-income or financial hardship, single-parent status, distance from the treating center), and policy reforms to alleviate the financial toxicity experienced by families navigating the challenging landscape of pediatric cancer. It is also essential that longitudinal reassessment and intervention occur throughout the cancer treatment trajectory and into survivorship or bereavement.

**Keywords:** Financial toxicity•Neoplasm•Child•Cost of illness•Parents



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P-1161

## Changing Lifestyle in Childhood Cancer Survivors with a New Approach in Nursing Education: (a Narrative Review)

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### Abstract

Background: Cancer survivors endure many physiological and psychological consequences due to several aggressive treatments such as: surgery, chemotherapy, radiotherapy etc. on the other hand, during the past decades, the survival rate has dramatically improved because of the advances in cancer treatment. Since children are in full development, these treatments can have a serious impact on their health on the long term and these children are at increased risk of other late effects, which may be due to combination of genetic factors and/or consequences of damage to various organs which can negatively affect their quality of life. By the age 45,95% of childhood cancer survivors have at least one chronic health condition.

A healthy lifestyle (that is consisted of avoiding alcohol consumption, diet, physical activity, etc.) is an important environmental factor which can positively affect the consequences above. Of course, healthy lifestyle may not only help diminish the risk of chronic health condition, but also promote the health of childhood cancer survivors.

Post treatment period cause children and their families face new challenges; So, they should learn new strategies to cope with new situation and nurses are one of the most qualified people in health organizations who can help these people, organize the new situation based on a healthy lifestyle.

This is a narrative review of the existing literature on the effect of lifestyle after cancer treatment, childhood cancer survivors and the role of nursing education in this group.

Method: A search in Science Direct, Google Scholar, PubMed, Scopus, and ProQuest data bases has carried out (last access September, 18th, 2023) with the following keywords: “nursing, children, cancer survivor, lifestyle, quality of life”. Unfortunately, some of the databases such as Medline and Web of Science are banned in Iran and we didn't have access. Case reports and qualitative articles were excluded. Filters for “English”, “nursing” and “clinical medicine” were applied.

Results: 221 articles were found, 8 of them removed because of repetition. 37 items removed after screening the title and 136 of them removed after screening the abstract. 40 articles remained.

Conclusion: Based on previous works, researchers classified lifestyle into six biobehavioral factors: BMI, physical activity, cigarette smoking status, alcohol consumption, sun exposure behavior and diet quality.



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It is shown that adopting a healthy lifestyle, may lower the chance of being affected by late effects. When the survivors are educated about their increased risk of disease, and trained and supported by healthcare practitioners into adopting healthy lifestyle habits, may prevent or delay these late effects.

Based on reviews, interactive expert-to-patient health behavior trainings showed positive effects on health-protective behaviors, such as: lowering junk food consumption, self-examinations or smoking intention rates. In addition, a peer-to-peer counselling intervention showed great effects on smoking cessation rates among children cancer survivors.

Authors state that nurses, especially oncology nurses are in an ideal position to address the needs of cancer survivors and prepare them for the transition to the post treatment phase of their experience with cancer and play important role in high quality survivorship care.

**Keywords:** nursing education, cancer survivor, cancer



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P-1167

## The effect of play therapy on the pain relief of children with cancer: a systematic review

Masoumeh Hosseinian

دانشگاه علوم پزشکی کاشان

### Abstract

م The effect of play therapy on the pain relief of children with cancer: a systematic review

abstract Introduction: One of the problems of cancer patients is pain, which there are many ways to alleviate. one A non-invasive method to reduce pain is play therapy. The purpose of this systematic review study is to investigate the effect The game aims to relieve the pain of children with cancer.

Materials and methods: The present study was conducted using a systematic review method. Search for SID Persian information sources. Magiran, IranMedex and English Pubmed, Scopus, Web of Sciences, Ovid, Science Direct and with the keywords of pain, play therapy, cancer, children, which were combined from 2004-2022, a total of 14 selected articles, 10 An intervention article was reviewed in accordance with the purpose of the study.

Findings: In general, according to the evidence, play therapy, which includes methods such as bubble-making, sand play, dramatic games, play rooms, coloring, hand puppets, and toys, on the amount Children's pain has had a positive and significant impact. In the intervention group, their pain was relieved in a shorter time, while in the control group, more time was spent until their pain was relieved. In the intervention group, the child deals with his aggressive actions more calmly, which supports the theory of cognitive activities by increasing enough sensory data to the brain to forget or stop the feeling of pain, group play therapy is a special technique that It is used not only to control pain but also to give it a reciprocal psychological meaning

Conclusion: According to the results of the reviewed studies, play therapy as a nursing intervention has had a positive effect on the severity of children's pain and can reduce their pain. Therefore, it is suggested to the medical personnel to help relieve the pain of children by doing these methods and to use drug treatment only in necessary conditions.

**Keywords:** pain, play therapy, cancer, children



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P-1022

## The role of physical activity and weight management in prevention of breast cancer

Shabnam Omidvar

بابل

### Abstract

( دومین سرطان شایع در سراسر جهان و شایع ترین بدخیمی است که در زنان بروز می کند (۹, ۲۲ BC مقدمه: سرطان سینه ) درصد از سرطان های زنان)، که با بیش از ۲ میلیون مورد جدید در سال ۲۰۱۸ تشخیص داده شد. اگرچه بروز در اروپای غربی و آمریکای شمالی بیشتر است، اما افزایش در کشورهای در حال توسعه، به دلیل افزایش امید به زندگی، شهرنشینی و پذیرش

سبک زندگی غربی ادامه دارد.

اطلاعات زیادی از مطالعات اپیدمیولوژیک ارتباط بین چربی اضافی بدن و بروز سرطان را نشان می دهد، شواهد خوبی وجود دارد که نشان می دهد کاهش وزن عمدی، و همچنین افزایش فعالیت بدنی، به عنوان یک رویکرد مقرون به صرفه برای کاهش بار سرطان، نویدبخش است. با این حال، شکاف های واضحی در درک ما از چگونگی ارتباط مکانیکی تغییرات در چربی بدن یا سطوح فعالیت بدنی با سرطان و میزان تأثیر آنها بر خطر سرطان وجود دارد. بررسی ارتباط علت و معلولی بین برنامه هایی که با موفقیت به کاهش وزن و به دنبال حفظ کاهش وزن و بروز سرطان، مهم است

مواد و روشها: مطالعه ی مروری حاضر با جستجو در گوگل اسکولار، پایمد و اسکوپوس و استفاده از کلید واژه های مقالات پژوهشی Breast cancer, physical activity, prevention, survivors, weight management, lifestyle و مداخله ای از سال ۲۰۱۰ تا ۲۰۲۲ مورد بررسی قرار گرفت

نتایج: مطالعات شواهدی مبنی بر ارتباط عدم تحرک و چاقی بیش از حد با افزایش خطر ابتلا به سرطان سینه بوده و بعلاوه با نتایج ضعیف در افراد مبتلا به سرطان سینه در مراحل اولیه و بالقوه قابل درمان مرتبط می دانند. اطلاعات کمتری از کارآزمایی های بالینی برای آزمایش تأثیر مداخلات مربوط به کنترل وزن یا فعالیت بدنی بر خطر یا نتایج سرطان پستان وجود دارد، اما تعدادی از کارآزمایی های در حال انجام تأثیر کاهش وزن و سایر تغییرات سبک زندگی پس از تشخیص سرطان را بر خطر عود سرطان سینه نشان داده اند. تغییرات سبک زندگی مزایایی فراتر از پتانسیل خود برای کاهش خطر سرطان پستان اولیه یا ثانویه دارد، از جمله بهبود پارامترهای متابولیک، کاهش خطر بیماری های همراه مانند دیابت و بیماری قلبی، بهبود عملکرد فیزیکی و کاهش عوارض جانبی درمان سرطان. با وجود این فواید بی شمار، اجرای مداخلات سبک زندگی در جمعیت های در معرض خطر و افراد نجات یافته از سرطان، تا به امروز محدود بوده است. این مقاله شواهد مرتبط با عوامل سبک زندگی را با خطر و پیامدهای سرطان پستان مرور می کند، کارآزمایی های تصادفی سازی شده تکمیل شده و در حال انجام را در مورد تأثیر تغییر سبک زندگی در پیشگیری اولیه و ثانویه سرطان پستان مورد بحث قرار می دهد، و تلاش ها برای اجرا و انتشار مداخلات سبک زندگی در افراد در معرض خطر و نجات یافتگان را مرور می کند

نتیجه گیری: بر اساس جدیدترین شواهد، توصیه های سبک زندگی تهیه شده توسط صندوق تحقیقات سرطان / موسسه آمریکایی تحقیقات سرطان جهان است شامل: (۱) حفظ وزن بدن سالم، (۲) فعالیت بدنی، (۳) دنبال کردن رژیم غذایی غنی از فیبر و سویا و (۴) محدود کردن مصرف چربی ها (به ویژه اسیدهای چرب اشباع)

**Keywords:** cancer•lifestyle•weight



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انجمن علمی  
هماتولوژی آنکولوژی ایران



P-1144

## Clinicopathological assessment of thyroid cancer patients referred to Imam Khomeini hospital of sari from early march 2014 to late march 2021.

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### Abstract

Background and purpose: Thyroid cancer is the foremost common threat among endocrine malignancies. Its rate has expanded all through the world amid the last decades, which appears awesome territorial varieties. More than 95% of thyroid cancers are determined from thyroid follicular epithelium, which are classified into 3 categories: differentiated, poorly differentiated and anaplastic. According to the WHO classification, the 5 fundamental histologic sorts of thyroid cancers are: PTC (papillary thyroid carcinoma), FTC (follicular thyroid carcinoma), MTC (medullary thyroid carcinoma), PDTC (poorly differentiated thyroid carcinoma) and anaplastic thyroid carcinoma (ATC). During the Last Decades, with far reaching utilize of diagnostic tools such as ultrasound and FNA, the diagnostic rate of thyroid cancer has been expanded. The risk factors of thyroid cancer are: Obesity, family history of thyroid cancer, past history of thyroid disease, utilization of iodine and radiation. In this study, an endeavor is made to assess components such as age group, sex, family history of thyroid cancer, hypothyroidism history, distant metastasis in thyroid cancer, sort of thyroid cancer pathology, tumor stage, capsule involvement, tumor size and lymph node involvement, we chosen to assess clinicopathological characteristics of thyroid cancer patients alluded to Imam Khomeini hospital of Sari between early March 2014 and the late March 2021.

**Keywords:** FNA, Papillary thyroid cancer, anaplastic thyroid cancer, Follicular thyroid cancer, SEER



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P-1209

## Examining the tumorigenic pathology results of *Lactobacillus acidophilus* bacterium supernatant effect on MCF7 cell line breast cancer mouse model

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### Abstract

**Introduction:** Breast cancer is the most common cancer diagnosed in women worldwide with 2.26 million new cases in 2020. In the eastern Mediterranean region, including Iran, breast cancer has the highest incidence and mortality rates among women compared to other cancers. Moreover, cancer is the second cause of human death in the world, next to the cardiovascular diseases. Based on previous research, using probiotic products has beneficial effects on human health through maintaining the intestinal microbial balance.

**Methods:** In this research, the effect of subcutaneous administration of *Lactobacillus acidophilus* bacterium supernatant on MCF7 breast cancer mouse xenograft model was investigated.

**Results:** Our histopathological examination showed that *Lactobacillus acidophilus* supernatant prevented and reduced tumor growth. It was observed that the growth was depended on the applied dose of the supernatant, where tumor growth inhibition was decreased significantly by increasing the concentration of supernatant. Furthermore, With increasing the dose or increasing the concentration of *Lactobacillus acidophilus* supernatant, vacuolar degeneration, hyperemia, infiltration of amyloid cells and replacement of connective tissue were observed. The degree of vacuolar degeneration was observed in the 5% group as mild and in the 10% and 20% group as moderate. Moderate hyperemia was observed only in the 20% group. It seems that increasing the dose of supernatant caused changes in osmotic pressure in cancer cells and vacuolar accumulations.

**Conclusion:** First, it can be concluded according to the histopathological results, the best effect was observed in 20%. Second, it is proposed that probiotics have less side effects and toxicity than chemical drugs due to the presence of natural and effective compounds and can be introduced as a new strategy for cancer treatment.

**Keywords:** *Lactobacillus acidophilus*, supernatant, mouse xenograft model, MCF7 cell line



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